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NEIC

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MULTIMEDIA COMPLIANCE INVESTIGATION

Georgia-Pacific, LLC Crossett Paper Operations
Crossett, Arkansas
NEIC Project No.: VP1116

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INTRODUCTION

At the request of U.S. Environmental Protection Agency (EPA) Region 6, EPA's National Enforcement Investigations Center (NEIC) conducted a multimedia compliance investigation of Georgia-Pacific, LLC Crossett paper operations (GP) in Crossett, Arkansas. NEIC conducted the on-site compliance investigation from February 3 through 12, 2015. GP's paper operations and associated waste streams are subject to major environmental statutes, including the Clean Air Act (CAA); Clean Water Act (CWA); and Resource Conservation and Recovery Act (RCRA). GP's operations are also subject to the requirements of environmental permits and regulations administered by the EPA and the Arkansas Department of Environmental Quality (ADEQ).

FACILITY BACKGROUND

GP's operations consist of a kraft pulp mill and bleach plant, which are located at 100 Mill Supply Road in Crossett, Arkansas. GP's operations began as a saw mill in 1849, and became the Crossett Lumber Company in 1899. GP purchased the Crossett Lumber Company in 1962. The facility has separate pulping and bleaching lines to process hardwood and softwood. GP produces a variety of paper products, which include tissue paper and paper towels, on eight paper machines and two paper extruding machines. NEIC prepared a written process description, located in **Appendix A**, which provides a detailed overview of GP's process areas. Photographs taken during the on-site inspection are included in **CAA Appendix A, CWA Appendix C, RCRA Appendix A, and CAA 112(r) Appendix A.**

ON-SITE INSPECTION SUMMARY

NEIC conducted the on-site inspection from February 3 through 12, 2015. EPA Region 6 and ADEQ inspectors participated in and/or observed the on-site inspection. During the opening conference, NEIC inspectors presented credentials to Sarah Ross, GP environmental team leader. During the on-site inspection, GP representatives provided a site windshield tour, detailed process descriptions, process area walkthroughs, and documentation/records pertaining to the multimedia investigation. NEIC inspectors reviewed records and documents, performed a visual inspection of the facility, and interviewed plant personnel. At the conclusion of the on-site inspection, an exit meeting was held to discuss preliminary findings. NEIC personnel stated that final determinations would be made in conjunction with EPA Region 6 personnel.

Clean Air Act

40 Code of Federal Regulations (CFR) Part 60 Subpart BB – Standards of Performance for Kraft Pulp Mills

Certain portions of GP's kraft pulp mill were constructed, reconstructed, or modified between September 24, 1976, and May 23, 2013; these sources are, therefore, subject to 40 CFR

Part 60 Subpart BB, which requires the control of gases containing total reduced sulfur (TRS). As specified in 40 CFR § 60.283(a), no gases from any affected portion of a kraft pulp mill which contain TRS in excess of 5 parts per million (ppm) by volume on a dry basis, corrected to 10 percent oxygen, are permitted to be discharged into the atmosphere.

The primary objective of the NEIC inspection was to determine compliance with 40 CFR Part 63 Subparts S and MM. Determination of compliance with 40 CFR Part 60 Subpart BB was not included in the original scope of the NEIC inspection; however, the NEIC inspectors observed that both the digesters and the brownstock washers at GP were modified after 1976 and are subject to the requirements of this regulation. The digesters are designed to vent gases to an incinerator, which is operated at a minimum temperature of 1200 degrees Fahrenheit (°F) for control of TRS. According to GP, the brownstock washers are designed to be fully enclosed and GP believes that it is not required to vent any gas streams from the brownstock washers to a control device. During process walkthroughs, NEIC inspectors observed visible defects where gases were released to the atmosphere from the capper valves on five batch digesters and from the brownstock washers.

40 CFR Part 63 Subpart S – National Emission Standards for Hazardous Air Pollutants from the Pulp and Paper Industry

As required by 40 CFR Part 63 Subpart S, hazardous air pollutant (HAP) emissions from GP's pulping and bleaching systems must be controlled and treated. As specified in 40 CFR § 63.443 (Standards for the pulping system at kraft, soda, and semi-chemical processes), for existing affected sources, the total HAP emissions from the following equipment systems shall be controlled: each low volume, high concentration (LVHC) system, each knotter with total HAP emissions above 0.1 pounds per ton of oven dried pulp (ODP), each screen system with total HAP emissions above 0.2 pounds per ton of ODP, or 0.3 pounds per ton of ODP for a knotter and screen system; each pulp washing system; each decker system that uses any process water other than fresh water or paper machine water or uses process water with a total HAP concentration greater than 400 ppm by weight; and each oxygen delignification system. These equipment systems listed above must be enclosed and vented into a closed-vent system and routed to a control device. GP has chosen to comply with the option described in 40 CFR § 63.443(d)(3) by routing gas streams from the LVHC system and high volume, low concentration (HVLC) system into its incinerator, which is required to operate at a minimum temperature of 1600 °F.

GP has two pulping lines: one line for pine (softwood) and one line for hardwood. LVHC and HVLC vent streams are collected separately throughout the pulping processes, but both types of vent streams are fed into the incinerator for destruction.

GP's pulp washing system for its pine and hardwood pulping lines include brownstock washers (a horizontal belt filter) and associated filtrate tanks. GP's brownstock washers are not vented to a control device. Additionally, the Betsy tank, which collects filtrate from the brownstock washer in the pine pulping line, is vented to the atmosphere.

As required by 40 CFR § 63.445, GP must enclose and route the equipment within each bleaching stage where chlorinated compounds are introduced to a control device. GP uses a wet scrubber to control chlorinated HAP emissions and is choosing to comply with 40 CFR § 63.445(c)(3) by achieving a treatment device outlet mass emission rate of 0.001 kilograms (kg) of total chlorinated HAP mass per megagram (0.002 pound per ton) of ODP. As an alternative to the monitoring requirements of 40 CFR § 63.453(c)(2), which states that the gas scrubber vent gas inlet flow rate shall be measured to determine compliance, GP monitors the bleach plant scrubber fan motor amperage instead.

The collection and control requirements for kraft pulping process condensates are described in 40 CFR § 63.446, which requires the collection and control of condensates from the following equipment systems: each digester system, each turpentine recovery system, each evaporator system condensate from the evaporator feed stages, each HVLC collection system, and each LVHC collection system. Regarding condensate collection requirements, GP has chosen the compliance option described in 40 CFR § 63.446(c)(3), which requires the collection of 5.5 kilograms or more of total HAP per megagram (11.1 pounds per ton) of ODP for mills that perform bleaching. However, GP filed a self-disclosure of potential environmental noncompliance that was submitted to the ADEQ on January 15, 2015 (**CAA Appendix B**); item #11 of the self-disclosure document discusses GP's pulping process condensate collection and destruction system. In this self-disclosure document, GP states that its existing emission calculations and factors concerning HAP concentrations in pulping process condensate collection and destruction system need to be updated.

40 CFR Part 63 Subpart MM – National Emission Standards for Hazardous Air Pollutants for Chemical Recovery Combustion Sources at Kraft, Soda, Sulfite, and Stand-Alone Semichemical Pulp Mills

40 CFR § 63.860(b)(1) defines an affected source as each existing chemical recovery system (as defined in 40 CFR § 63.861) located at a kraft or soda pulp mill that is a major source of HAP emissions. The existing chemical recovery system used by GP consists of a recovery furnace (8R recovery furnace), the east and west smelt dissolving tanks, and a lime kiln. GP's recovery furnace is equipped with an electrostatic precipitator (ESP), each smelt dissolving tank is equipped with a spray scrubber, and the lime kiln is controlled with a venturi scrubber.

GP operates a continuous opacity monitoring system (COMS) on its ESP, as required in 40 CFR § 63.864(d). The smelt dissolving tank scrubbers and lime kiln scrubbers utilize continuous parameter monitoring systems (CPMS), as required in 40 CFR § 63.864(e), that determine and record the pressure drop and scrubber liquid flow rate.

ADEQ Air Operating Permit No.: 0597-AOP-R15

GP is operating under a Title V operating permit issued on August 4, 2011, and expiring on August 3, 2016. The bleach plant has a source number of SN-30 in GP's Title V permit. GP's 8R recovery furnace has a source number of SN-26 in its Title V permit. The 8R recovery furnace has a more stringent opacity limitation in the Title V permit than contained in 40 CFR 63.864(k)(i). Requirements in the Title V permit are also different for the smelt dissolving tank scrubbers and lime kiln scrubber, requiring a daily average evaluation rather than a 3-hour average.

Clean Water Act

GP is authorized under National Pollutant Discharge Elimination System (NPDES) permit No. AR0001210 to discharge wastewater to the Ouachita River Basin through one main outfall (outfall 001) (**CWA Appendix A**). The current permit became effective November 1, 2010, was modified effective July 1, 2011, and is set to expire on October 31, 2015. The permit also authorizes the discharge of wastewater through a stream monitoring station (SMS) (SMS 002) and three internal outfalls for effluent from the bleach plant (outfalls 101, 102, and 103). The permit designates the receiving waters for outfall 001 as the upper reaches of Mossy Lake, then into Coffee Creek, then into the Ouachita River in Segment 2D of the Ouachita River Basin. Discharges covered under outfall 001 include process wastewater, sanitary wastewater, landfill leachate, site storm water, chemical plant wastewater, building products wastewater, treated effluent from the City of Crossett (City), truck wash water, backwash wastewater, and product stewardship waters. SMS 002 is a monitoring location designated as the transition from Mossy Lake to Coffee Creek. Internal outfall 101 is the monitoring location for Hardwood Line 1A effluent. Internal outfall 102 is the monitoring location for Hardwood Line 1B effluent. Internal outfall 103 is the monitoring location for Softwood Line 2 effluent.

NEIC inspected the following during the CWA portion of the on-site inspection: process wastewater sources, Best Management Practices (BMP) implementation areas, wastewater collection and monitoring locations, City of Crossett wastewater treatment plant, GP wastewater treatment system, outfall locations and receiving waters, and effluent monitoring locations and activities. The NEIC CWA team also reviewed inspection-related documents including: the NPDES permit, NPDES permit application, BMP plan, discharge monitoring reports (DMRs), and sampling and laboratory records.

Resource Conservation and Recovery Act

GP is a large quantity generator of hazardous waste (EPA ID No. ARD035466648). The facility was inspected in April 2012 by EPA Region 6. No enforcement action has been undertaken based on the April 2012 inspection.

GP operates a separate facility located across Highway 82 from the main paper plant. This facility is called Extrusion, and consists of paper machines that coat paperboard produced in the main plant. Wastes generated at Extrusion consist of aerosol cans (hazardous waste) and universal wastes. Extrusion is using the same RCRA identification number as the main paper plant. Wastes are picked up directly from the Extrusion building by the hazardous waste transporter. If wastes were to be transported to the main paper plant, the truck would need to travel along Highway 82, a public road. NEIC inspected three satellite accumulation areas of hazardous waste and one universal waste area at Extrusion.

NEIC inspected the less-than-90-day accumulation area of hazardous waste, seven satellite accumulation areas of hazardous waste, one used oil storage area, and three universal waste areas at the main paper plant.

Clean Air Act Section 112(r)

During the CAA 112(r) portion of the investigation, NEIC inspectors evaluated GP's compliance with 40 CFR Part 68 – Chemical Accident Prevention Provisions. NEIC focused on mechanical integrity, process hazard analysis, compliance audits, standard operating procedures, management of change, incident investigations, and emergency response.

GP included two Program 3 process units in its current risk management plan, submitted on October 16, 2014. Toxic chemicals (chlorine and chlorine dioxide) are contained within the regulated process units operated on-site. Chlorine is used in treatment of process water and drinking water, and the covered process consists of two chlorine storage areas: Saline River plant and the drinking water area. Chlorine dioxide is generated, stored, and used on-site in the bleach plant; the covered process consists of the chlorine dioxide generator, two storage tanks, and the piping leading into the bleach plants.

Process hazard analyses (PHAs) were conducted on the chlorine dioxide process in June 2009 and June 2014. PHAs were conducted on the chlorine water treatment process in July 2007 and September 2011. All recommendation and action items resulting from the analyses were addressed by January 2015. Action items are tracked using an action plan tracker database system. A responsible person and due date are assigned in the tracking system. The system sends out email reminders that action items are open.

Mechanical integrity inspections are managed using an inspection testing preventive maintenance plan. Chlorine dioxide process equipment is inspected internally and externally, and thickness readings are taken during the annual outage. The chlorine dioxide generator is visually inspected monthly. Piping in the chlorine dioxide process is visually inspected every 5 years. There is no underground piping or insulation on piping in the chlorine dioxide process. The chlorine dioxide storage tanks are carbon steel tanks that are lined on the inside with tile, and covered on the outside with foam insulation.

Compliance audit findings are tracked using the same action plan tracker database system used for PHA recommendations. GP conducted compliance audits in July 2010 and March 2013.

Operating procedures are annually revalidated as an action item in the action plan tracker database system. These annual revalidations are signed by the subject matter experts and management on the cover sheets to each procedure. Hard copies of the operating procedures are maintained in the control rooms. Operators also have access to electronic versions of the operating procedures if needed.

Management of change (MOC) can be submitted by an optimizer or an operator. The system is electronic for submissions. Review areas are assigned during a meeting. The review consists of 7 sections containing a total of approximately 100 questions. A responsible person is assigned to track each MOC through closure. Temporary MOCs undergo the same review process.

Operations and maintenance personnel enter incident investigations into a tracking system. An incident investigation team is created, and the investigation is begun within 48 hours. Any identified corrective actions are tracked in the action plan tracker database system. Investigation reports are generated for all incidents investigated on-site.

GP operates its own on-site fire, rescue, and hazardous materials response capabilities. Bleach plant employees are trained to handle hazardous material. Supervisors in the bleach plant have completed incident commander training. The fire team is on call with a pager system that operates through team members' cell phones. The facility has a fire truck equipped with its own fire water tank. Fire monitors and hoses are located throughout the plant. GP has an agreement with the Crossett Fire Department to provide support when requested. The GP incident commander makes the decision to request support.

Training for operators is computer-based and consists of area-specific training, health and safety training, and process safety management training. Training is completed every 2 years. Each new operator is paired with an area operator to receive on-the-job training. If an operating procedure is updated, the updated operating procedure is electronically sent to the operators. The document must be reviewed by the operator and then electronically acknowledged that it has been read.

SUMMARY OF FINDINGS

Observations identified by NEIC during the GP multimedia investigation are summarized in the following table. These observations are linked to specific supporting documents that can be found in individual appendices to this table. These observations are categorized as areas of noncompliance (AON) and as areas of concern (AOC); areas of concern are inspection observations of problems or activities that could impact the environment or result in future or current noncompliance, and/or are areas associated with pollution prevention.

#	Regulatory Citation	Findings/Observations	Supporting Evidence
	CLEAN AIR ACT – KRISTINE PORDESIMO, MATTHEW SCHNEIDER		
	40 CFR Part 60 Subpart BB – Standards of Performance for Kraft Pulp Mills		
	AREAS OF NONCOMPLIANCE		
1.	**40 CFR § 60.283 Standard for total reduced sulfur (TRS).** **(a)** *On and after the date on which the performance test required to be conducted by §60.8 is completed, no owner or operator subject to the provisions of this subpart shall cause to be discharged into the atmosphere:* **(1)** *From any digester system, brown stock washer system, multiple-effect evaporator system, or condensate stripper system any gases which contain TRS in excess of 5 ppm by volume on a dry basis, corrected to 10 percent oxygen…* **Batch Digesters (SN-59) Condition 68** *The Batch Digesters (SN-59) are subject to and shall comply with all applicable provisions of…40 CFR Part 60 BB – Standards of Performance for Kraft Pulp and Paper Mills. The Incinerator (SN-83) satisfies the requirements under §60.283(a)(1)(iii).* **(a)***The permittee shall not cause to be discharged into the atmosphere from the digester system any gases which contain TRS in excess of 5 ppm by volume on a dry basis, corrected to 10 percent oxygen, unless the conditions of 40 CFR §60.283(a)(1)(i)-(vi) are met.*	**Finding** **Gases containing TRS were released to the atmosphere from the batch digesters.** GP's Title V permit (**CAA Appendix C**, page 5 of 49**)** shows that GP's batch digesters are subject to 40 CFR Part 60 Subpart BB–Standards of Performance for Kraft Pulp Mills because the digesters were modified between September 24, 1976, and May 23, 2013. This standard prohibits the emissions of any gases to the atmosphere from the digesters that contain greater than 5 ppm TRS. During a walkthrough of the digester system on February 5, 2015, NEIC inspectors observed vapors emanating from the top of capper valves on five batch digesters (#s 4, 8, 9, 10, and 11) that were operating under pressure (**CAA Appendix A,** IMGP0056 and IMGP0058). NEIC inspectors also observed vapors emanating from the flange on the side of the # 3 digester capper valve (**CAA Appendix A,** IMGP0059 and IMGP0060). In its February 20, 2015, response to NEIC (**CAA Appendix D**), GP stated that it believes that the emissions NEIC inspectors observed emanating from the digesters would not exceed the applicable standards of 40 CFR Part 60 Subpart BB. GP has asserted that because the digesters are located within a building and the gases are being emitted into the building, these standards are being met because, at the time the gases are finally released into the atmosphere, the emissions likely contain less than 5 ppm TRS. The building is not vented to the incinerator, GP's control device for HAP	**CAA Appendix A** – CAA Photographs **CAA Appendix C** – Select Pages of Title V Permit **CAA Appendix D** – GP February 20, 2015, Email Discussions with GP representatives

#	Regulatory Citation	Findings/Observations	Supporting Evidence
		emissions for the digester system; it appears the building is equivalent to the atmosphere in this situation.	
2.	**40 CFR §60.283 Standard for total reduced sulfur (TRS).** **(a)** *On and after the date on which the performance test required to be conducted by §60.8 is completed, no owner or operator subject to the provisions of this subpart shall cause to be discharged into the atmosphere:* **(1)** *From any digester system, brown stock washer system, multiple-effect evaporator system, or condensate stripper system any gases which contain TRS in excess of 5 ppm by volume on a dry basis, corrected to 10 percent oxygen, unless the following conditions are met:…* **(iv)** *It has been demonstrated to the Administrator's satisfaction by the owner or operator that incinerating the exhaust gases from a new, modified, or reconstructed brown stock washer system is technologically or economically unfeasible. Any exempt system will become subject to the provisions of this subpart if the facility is changed so that the gases can be incinerated.* **Pulp Mill Operations, Condition 73** *The Line 1 Washer (SN-33) and Line 2 Washer (SN-34) are subject to and shall comply with all applicable provisions of…40 CFR Part 60 BB – Standards of Performance for Kraft Pulp and Paper Mills. The Incinerator (SN-83) satisfies the requirements under §60.283(a)(1)(iii).* **(a)***The permittee shall not cause to be discharged into the atmosphere from the digester system any gases which contain TRS in excess of 5 ppm by volume on a dry basis, corrected to 10 percent oxygen, unless the conditions of 40 CFR §60.283(a)(1)(i)-(vi) are met.*	**Finding** **Gases containing TRS were released to the atmosphere from the entries, exits, and enclosures of GP's brownstock washers (GP-2 and GP-3 washers).** GP's Title V permit (**CAA Appendix C**, page 19 of 49**)** shows that the GP-2 and GP-3 washers (also referred to as Line 1 and Line 2 washers in the Title V permit) are subject to 40 CFR Part 60 Subpart BB–*Standards of Performance for Kraft Pulp Mills* because the washers were constructed or modified between September 24, 1976, and May 23, 2013. In its February 20, 2015, response to NEIC (**CAA Appendix D**), GP stated that its washers are exempt from the TRS emission standard in 40 CFR §60.283(a)(1) because it believes that the specific type of washers (horizontal belt filters) in place are designed as closed systems with no identifiable emissions points. However, during a walkthrough of the pulp mill on February 5, 2015, NEIC inspectors observed vapors emanating from the entries, exits, and enclosures of the GP-2 and GP-3 washers (**CAA Appendix A,** IMGP0061, IMGP0062, IMGP0063, IMGP0072, and IMGP0073). GP has claimed that it is not required to control TRS emissions from the washers because EPA gave permission to a different pulp mill with a similar belt-type washer in EPA Region 4, which exempted that washer from the TRS emission standards in 40 CFR § 60.283(a)(1). However, in its written determination granting the exemption to the pulp mill in EPA Region 4 (**CAA Appendix E),** EPA stated that the facility provided EPA with site-specific information and TRS control cost estimates in its exemption request. GP has not requested an exemption from the TRS emission standards, nor is GP's situation equivalent to the referenced situation. Additionally, GP has not demonstrated that controlling TRS emission from the washers is unfeasible.	**CAA Appendix A** – CAA Photographs **CAA Appendix C** – Select Pages of Title V Permit **CAA Appendix D** – GP February 20, 2015, Email **CAA Appendix E** – EPA Applicability Determination Index Control Number 9700087 Discussions with GP representatives

#	Regulatory Citation	Findings/Observations	Supporting Evidence
	40 CFR Part 63 Subpart S – National Emission Standards for Hazardous Air Pollutants from the Pulp and Paper Industry		
	AREAS OF NONCOMPLIANCE		
1.	**40 CFR § 63.443(a)** *The owner or operator of each pulping system using the kraft process subject to the requirements of this subpart shall control the total HAP emissions from the following equipment systems, as specified in paragraphs (c) and (d) of this section.* **(1)** *At existing affected sources, the total HAP emissions from the following equipment systems shall be controlled:* **(i)** *Each LVHC system;* **(c)** *Equipment systems listed in paragraphs (a) and (b) of this section shall be enclosed and vented into a closed-vent system and routed to a control device that meets the requirements specified in paragraph (d) of this section. The enclosures and closed-vent system shall meet the requirements specified in §63.450.* **40 CFR § 63.450 Standards for enclosures and closed-vent systems.** **(a)** *Each enclosure and closed-vent system specified in §§63.443(c), 63.444(b), and 63.445(b) for capturing and transporting vent streams that contain HAP shall meet the requirements specified in paragraphs (b) through (d) of this section.* **(b)** *Each enclosure shall maintain negative pressure at each enclosure or hood opening as demonstrated by the procedures specified in §63.457(e). Each enclosure or hood opening closed during the initial performance test specified in §63.457(a) shall be maintained in the same closed and sealed position as during the performance test at all times except when necessary to use the opening for sampling, inspection, maintenance, or repairs.* **40 CFR § 63.453 Monitoring requirements.**	**Finding** **The total HAP emissions from GP's batch digesters are not enclosed and vented into a closed-vent system, and are not routed to a control device.** During a walkthrough of the digester system on February 5, 2015, NEIC inspectors observed vapors emanating from the top of capper valves on five batch digesters (#s 4, 8, 9, 10, and 11) that were operating under pressure (**CAA Appendix A,** IMGP0056 and IMGP0058). NEIC inspectors also observed vapors coming from the flange on the side of the #3 digester capper valve (**CAA Appendix A,** IMGP0059 and IMGP0060). The digesters are operated under pressure, and the pressure is controlled by relief through a closed-vent system that routes the vapors to the low volume, high concentration system. However, a ball valve (also called a capper valve) opens to feed chips into the digester and closes in order to maintain pressure on the digester while it is cooking the chips. Vapors were observed leaking past the capper valve on every digester that was operating under pressure at the time of the NEIC inspection. GP has asserted that the capper valves on the digesters are not part of a closed-vent system and that monthly visual inspections are not required because the equipment is not operated under negative pressure. In its February 20, 2015, email to NEIC (**CAA Appendix D)**, GP stated that the closed-vent system does not extend to the process equipment itself and, therefore, asserted that the process equipment comprising the digester system is not part of the closed-vent system. Additionally, GP believes that its closed-vent system begins at the point where the non-condensable gas (NCG) line connects to the tertiary condenser, which is the final relief gas condenser in the digester system (**Appendix A**). The intent of the regulation is to control the total HAP emissions from the LVHC system, which includes the batch digesters. NEIC inspection of the source indicated that the digesters are not enclosed and vented into a closed-vent system, as required in 40 CFR § 63.443(c). Additionally, GP's digesters are not being operated with good air pollution control practices for minimizing emissions, in accordance with 40 CFR § 63.453(q)**.**	**Appendix A** – NEIC Process Description **CAA Appendix A** – CAA Photographs **CAA Appendix D** – GP February 20, 2015, Email Discussions with GP representatives

#	Regulatory Citation	Findings/Observations	Supporting Evidence
	(k) *Each enclosure and closed-vent system used to comply with §63.450(a) shall comply with the requirements specified in paragraphs (k)(1) through (k)(6) of this section.* **(1**) *For each enclosure opening, a visual inspection of the closure mechanism specified in §63.450(b) shall be performed at least once every 30 days to ensure the opening is maintained in the closed position and sealed.* **(2)** *Each closed-vent system required by §63.450(a) shall be visually inspected every 30 days and at other times as requested by the Administrator. The visual inspection shall include inspection of ductwork, piping, enclosures, and connections to covers for visible evidence of defects.* **(q)** *At all times, the owner or operator must operate and maintain any affected source, including associated air pollution control equipment and monitoring equipment, in a manner consistent with safety and good air pollution control practices for minimizing emissions. Determination of whether such operation and maintenance procedures are being used will be based on information available to the Administrator which may include, but is not limited to, monitoring results, review of operation and maintenance procedures, review of operation and maintenance records, and inspection of the source.* **40 CFR § 63.441 Definitions** Low volume, high concentration or LVHC system *means the collection of equipment including the digester, turpentine recovery, evaporator, steam stripper systems, and any other equipment serving the same function as those previously listed.* *Closed-vent system means a system that is not open to the atmosphere and is composed of piping, ductwork, connections, and, if necessary, flow-inducing devices*		

#	Regulatory Citation	Findings/Observations	Supporting Evidence
	that transport gas or vapor from an emission point to a control device.		
2.	**40 CFR § 63.443(a)** *The owner or operator of each pulping system using the kraft process subject to the requirements of this subpart shall control the total HAP emissions from the following equipment systems, as specified in paragraphs (c) and (d) of this section.* **(1)** *At existing affected sources, the total HAP emissions from the following equipment systems shall be controlled:* **(iii)** *Each pulp washing system;* **(c)** *Equipment systems listed in paragraphs (a) and (b) of this section shall be enclosed and vented into a closed-vent system and routed to a control device that meets the requirements specified in paragraph (d) of this section. The enclosures and closed-vent system shall meet the requirements specified in §63.450.* **40 CFR § 63.441 Definitions** Pulp washing system *means all equipment used to wash pulp and separate spent cooking chemicals following the digester system and prior to the bleaching system, oxygen delignification system, or paper machine system (at unbleached mills). The pulp washing system equipment includes vacuum drum washers, diffusion washers, rotary pressure washers,* ***horizontal belt filters****, intermediate stock chests, and their associated vacuum pumps, filtrate tanks, foam breakers or tanks, and any other equipment serving the same function as those previously listed. The pulp washing system does not include deckers, screens, knotters, stock chests, or pulp storage tanks following the last stage of pulp washing.* **Pulp, Paper, and Paperboard Industry – Background Information for Proposed Air Emission Standards Manufacturing Processes at**	**Finding** **The total HAP emissions from the GP-2 and GP-3 washers are not enclosed, not vented into a closed-vent system, and not routed to a control device.** During a walkthrough of the pulp mill on February 5, 2015, NEIC inspectors observed vapors emanating from the entries, exits, and enclosures of the GP-2 and GP-3 washers (**CAA Appendix A,** IMGP0061, IMGP0062, IMGP0063, IMGP0072, and IMGP0073). NEIC inspectors also observed black liquor spilling out of the washers and onto the drains under the washers, into a containment sump, which discharges to the P1 sewer (**CAA Appendix A,** IMGP0064, IMGP0065, and IMGP0066). The preamble to 40 CFR Subpart S (63 *Federal Register* [FR] 18508) (**CAA Appendix F,** page 5 of 248) states that the intent of the rule is to require both enclosure and venting of the washer to the control device. Also, EPA's background information document for 40 CFR Part 63 Subpart S (**CAA Appendix G**) explains that EPA is aware of the design of the horizontal belt filter-type washers and did not specifically exempt them from control. According to GP representatives, the GP-2 and GP-3 washers are designed to be totally enclosed and, therefore, GP believes that it is not required to vent the washers to a control device. The washers are horizontal belt filters, which are included in the definition of pulp washing system; therefore, total HAP emissions are required to be controlled. 40 CFR Subpart S does not contain an exemption for controls for equipment that are designed to be totally enclosed; therefore, the washer enclosures are required to be vented to a control device. There is no regulatory basis for GP to consider its washers exempt from the control requirements for pulp washing systems in 40 CFR § 63.443(c).	**CAA Appendix A** – CAA Photographs **CAA Appendix F** – Federal Register Vol., 63, No. 72, April, 15, 1998, 18508 **CAA Appendix G** –Select Pages of Pulp, Paper, and Paperboard Industry – Background Information for Proposed Air Emission Standards Discussions with GP representatives

#	Regulatory Citation	Findings/Observations	Supporting Evidence
	Kraft, Sulfite, Soda, and Semi-Chemical Mills, EPA-453/R-93-050a, October 1993, Page 2-15 *Washers such as the rotary vacuum drum washer are typically hooded and, therefore, not fully enclosed. These washers require large volumes of air to capture and vent moisture and fugitive emissions and, consequently, will have a dilute HAP concentration (and thus a lower heat content). Washers such as the diffusion washer or horizontal belt washer are enclosed or have limited exposure to ambient air. Vent streams from these washers, therefore, will have lower flow rates with higher HAP concentrations.*		
3.	**40 CFR § 63.443(a)** *The owner or operator of each pulping system using the kraft process subject to the requirements of this subpart shall control the total HAP emissions from the following equipment systems, as specified in paragraphs (c) and (d) of this section.* **(1)** *At existing affected sources, the total HAP emissions from the following equipment systems shall be controlled:* **(iii)** *Each pulp washing system;* **40 CFR §63.441 Definitions** Pulp washing system *means all equipment used to wash pulp and separate spent cooking chemicals following the digester system and prior to the bleaching system, oxygen delignification system, or paper machine system (at unbleached mills). The pulp washing system equipment includes vacuum drum washers, diffusion washers, rotary pressure washers, horizontal belt filters, intermediate stock chests, and their associated vacuum pumps, filtrate tanks, foam breakers or tanks, and any other equipment serving the same function as those previously listed. The pulp washing system does not include deckers, screens, knotters, stock chests, or pulp storage tanks following the last stage of pulp washing.*	**Finding** **The total HAP emissions from the Betsy tank, a filtrate tank, are not controlled and are vented to the atmosphere.** During a walkthrough of the pulp mill on February 5, 2015, NEIC inspectors observed that the Betsy tank, a tank that collects filtrate from the GP-2 washer, is vented to the atmosphere **CAA Appendix A,** IMGP0071). GP asserts that the Betsy tank is a weak black liquor tank and, therefore, is not required to be controlled. However, the Betsy tank collects filtrate from the washer; therefore, it is a filtrate tank. Filtrate tanks are included as part of the pulp washing system; therefore, total HAP emissions are required to be controlled from the Betsy tank. Although there is no definition for filtrate tank, the EPA background information document clearly states that weak black liquor is collected in filtrate tanks, such as the Betsy tank, before it is sent to the chemical recovery process.	**Appendix A** – NEIC Process Description **CAA Appendix A** – CAA Photographs **CAA Appendix G** –Select Pages of Pulp, Paper, and Paperboard Industry – Background Information for Proposed Air Emission Standards Discussions with GP representatives

#	Regulatory Citation	Findings/Observations	Supporting Evidence
	Pulp, Paper, and Paperboard Industry – Background Information for Proposed Air Emission Standards Manufacturing Processes at Kraft, Sulfite, Soda, and Semi-Chemical Mills, EPA-453/R-93-050a, October 1993, Page 2-14 *Washers differ according to the method used to separate black liquor from brownstock pulp. All washers require the addition of water (fresh or recycled) to rinse the pulp and recover the black liquor. The rinsed pulp is screened for oversize particles and thickened in a decker (emission point ID 7), where excess water is removed prior to oxygen delignification, bleaching, or storage. The diluted or "weak" black liquor is recovered in filtrate tanks and sent to the chemical recovery process.*		
4.	**40 CFR § 63.443 (a)** *The owner or operator of each pulping system using the kraft process subject to the requirements of this subpart shall control the total HAP emissions from the following equipment systems, as specified in paragraphs (c) and (d) of this section.* **(1)** *At existing affected sources, the total HAP emissions from the following equipment systems shall be controlled:* **(iii)** *Each pulp washing system;* **40 CFR §63.441 Definitions** Pulp washing system *means all equipment used to wash pulp and separate spent cooking chemicals following the digester system and prior to the bleaching system, oxygen delignification system, or paper machine system (at unbleached mills). The pulp washing system equipment includes vacuum drum washers, diffusion washers, rotary pressure washers, horizontal belt filters, intermediate stock chests, and their associated vacuum pumps, filtrate tanks, foam breakers or tanks, and any other equipment serving the same function as those previously listed. The pulp*	**Finding** **The total HAP emissions from the pine liquor fill storage tank and filter feed tank, filtrate tanks, are not controlled and are vented to the atmosphere.** During a walkthrough of the digester pulp mill on February 5, 2015, NEIC inspectors observed that the pine liquor fill storage tank and filter feed tank are vented to the atmosphere **(CAA Appendix A,** IMGP0075**)**. The pine liquor fill storage tank collects condensate from the blow vapor separator, which condenses vapors from the blow tank, which is part of the digester system. Both the pine liquor fill storage tank and filter feed tank collect filtrate from the Betsy tank, which functions as a filtrate tank in the pulp washing system. Because the pine liquor fill storage tank and filter feed tank contain filtrate from a filtrate tank (Betsy tank) in the pulp washing system, these tanks should be vented into the closed-vent system and routed to GP's incinerator, which serves as the control device to reduce total HAP emissions.	**Appendix A** – NEIC Process Description **CAA Appendix A** – CAA Photographs

#	Regulatory Citation	Findings/Observations	Supporting Evidence
	washing system does not include deckers, screens, knotters, stock chests, or pulp storage tanks following the last stage of pulp washing.		
5.	**40 CFR § 63.443(a)** *The owner or operator of each pulping system using the kraft process subject to the requirements of this subpart shall control the total HAP emissions from the following equipment systems, as specified in paragraphs (c) and (d) of this section.* **(1)** *At existing affected sources, the total HAP emissions from the following equipment systems shall be controlled:* **(ii**) *Each knotter or screen system with total HAP mass emission rates greater than or equal to the rates specified in paragraphs (a)(1)(ii)(A) or (a)(1)(ii)(B) of this section or the combined rate specified in paragraph (a)(1)(ii)(C) of this section.* **(A)** *Each knotter system with emissions of 0.05 kilograms or more of total HAP per megagram of ODP (0.1 pounds per ton).* **40 CFR § 63.441 Definitions** Knotter system *means equipment where knots, oversized material, or pieces of uncooked wood are removed from the pulp slurry after the digester system and prior to the pulp washing system. The knotter system equipment includes the knotter, knot drainer tanks, ancillary tanks, and any other equipment serving the same function as those previously listed.*	**Finding** **GP has not tested all pieces of equipment included in its knotter system and cannot demonstrate that emissions are below 0.1 pounds of total HAP emissions per ton of ODP.** During a walkthrough of the pulp mill on February 5, 2015, NEIC inspectors observed vapors emanating from the flat screens and screw press (**CAA Appendix A**, IMGP0068, IMGP0069, IMGP0070, and IMGP0074). Additionally, the pressate tank, which receives residual black liquor from the screw press, was designed to be controlled and was venting through a hole on the top of the tank (**CAA Appendix A**, IMGP0074). (See AOC B of Subpart S.) NEIC reviewed GP's *Knotting and Screen Systems Tests* results (**CAA Appendix H**), and only the flat screens (also referred to as the vibrating drainer) were tested to determine HAP emission rates for the knotter system. According to the definition of knotter system in 40 CFR § 63.441, a knotter system includes the knotter, knot drainer tanks, ancillary tanks, and any other equipment serving the same function. Based on process discussions with GP representatives (**Appendix A**), it appears that the knot tank, pressate tank, and screw press are part of GP's knotter system and should have been tested to determine HAP emissions. GP's knotter system includes the flat screens, knot tank, pressate tank, and screw press and, therefore, total HAP emissions are required to be controlled from the these pieces of equipment if the emissions of the entire knotter system are determined to be above 0.1 pounds per ton. GP cannot prove that its knotter system has emissions below 0.1 pounds of total HAP emissions per ton of ODP. GP did not test all pieces of equipment that are part of its knotter system. Additionally, in its February 20, 2015, email to NEIC (**CAA Appendix D**), GP stated that it has not been able to locate background documentation for its knotter and screen system tests.	**Appendix A** – NEIC Process Description **CAA Appendix A –** CAA Photographs **CAA Appendix H** – November 20, 2003, Knotting and Screen Systems Tests **CAA Appendix D** – GP February 20, 2015, Email
6.	**40 CFR § 63.445(b)** *The equipment at each bleaching stage, of the bleaching systems listed in paragraph (a) of this section, where chlorinated compounds are introduced shall be enclosed and vented into a closed-vent system and routed to a*	**Finding** **Emissions from the D0 seal tank in the 1B bleach line are not being captured and controlled.**	**CAA Appendix A** – CAA Photographs

#	Regulatory Citation	Findings/Observations	Supporting Evidence
	control device that meets the requirements specified in paragraph (c) of this section.… **40 CFR § 63.441 Definitions** Bleaching stage *means all process equipment associated with a discrete step of chemical application and removal in the bleaching process including chemical and steam mixers, bleaching towers, washers, seal (filtrate) tanks, vacuum pumps, and any other equipment serving the same function as those previously listed.* **40 CFR § 63.453 Monitoring requirements.** **(q)** *At all times, the owner or operator must operate and maintain any affected source, including associated air pollution control equipment and monitoring equipment, in a manner consistent with safety and good air pollution control practices for minimizing emissions. Determination of whether such operation and maintenance procedures are being used will be based on information available to the Administrator which may include, but is not limited to, monitoring results, review of operation and maintenance procedures, review of operation and maintenance records, and inspection of the source.*	During a walkthrough of the bleach plant on February 6, 2015, NEIC inspectors observed vapors emanating from the top of the D0 seal tank of the 1B bleach line (**CAA Appendix A,** IMGP0083). Additionally, NEIC inspectors also observed evidence of stains off the side of the D0 seal tank, which indicates leaks had occurred in the past (**CAA Appendix A,** IMGP0084). Seal tanks are part of a bleaching stage where chlorinated compounds are introduced. According to 40 CFR § 63.445(b), each bleaching stage where chlorinated compounds are introduced must be enclosed and vented into a closed-vent system. The D0 seal tank was designed to be enclosed and overflow into the foam tank, which is vented to the bleach plant scrubber. NEIC inspectors observed emissions emanating from the top of the tank, and GP representatives acknowledged that there was a crack on the top of the tank. It does not appear that GP is operating the D0 seal tank according to good air pollution control practices for minimizing emissions, as required in 40 CFR § 63.453(q).	
7.	**40 CFR § 63.445(b)** *The equipment at each bleaching stage, of the bleaching systems listed in paragraph (a) of this section, where chlorinated compounds are introduced shall be enclosed and vented into a closed-vent system and routed to a control device that meets the requirements specified in paragraph (c) of this section…* **40 CFR §63.441 Definitions** Bleaching stage *means all process equipment associated with a discrete step of chemical application and removal in the bleaching process including chemical and steam mixers, bleaching towers, washers, seal (filtrate) tanks, vacuum pumps,*	**Finding** **Emissions from the D2 upflow tower were bypassing the control device through a pressure relief device. GP did not consider this pressure relief device to be a bypass line, and it is not equipped with a flow indicator or car seal.** NEIC observed visible emissions from the D2 upflow tower, which is part of a bleaching stage where chlorinated compounds are introduced (**CAA Appendix A,** IMGP0054). According to GP personnel, the D2 upflow tower should be operated under vacuum. However, GP determined that an operator had closed a condensate drain that provides the vacuum on the tower, and, consequently, the tower was operating under pressure, which led to venting through a pressure relief device. Neither NEIC nor GP can determine how long emissions from the D2 upflow tower were being vented to the atmosphere.	**CAA Appendix A** – CAA Photographs Discussions with GP representatives

#	Regulatory Citation	Findings/Observations	Supporting Evidence
	and any other equipment serving the same function as those previously listed. **40 CFR § 63.450 Standards for enclosures and closed-vent systems.** **(d)** *Each bypass line in the closed-vent system that could divert vent streams containing HAP to the atmosphere without meeting the emission limitations in §§63.443, 63.444, or 63.445 shall comply with either of the following requirements:* **(1)** *On each bypass line, the owner or operator shall install, calibrate, maintain, and operate according to the manufacturer's specifications a flow indicator that is capable of taking periodic readings as frequently as specified in §63.454(e). The flow indicator shall be installed in the bypass line in such a way as to indicate flow in the bypass line; or* **(2)** *For bypass line valves that are not computer controlled, the owner or operator shall maintain the bypass line valve in the closed position with a car seal or a seal placed on the valve or closure mechanism in such a way that valve or closure mechanism cannot be opened without breaking the seal.*	GP does not consider this pressure relief device to be a bypass line; it only considers bypass lines that are located on equipment normally operated under positive pressure are required to be monitored. GP does not have a flow indicator or car seal on any bypass lines located on equipment that is normally operated under vacuum.	
8.	**40 CFR § 63.446(b)** *The pulping process condensates from the following equipment systems shall be treated to meet the requirements specified in paragraphs (c), (d), and (e) of this section:* **(d)** *The pulping process condensates from the equipment systems listed in paragraph (b) of this section shall be conveyed in a closed collection system that is designed and operated to meet the requirements specified in paragraphs (d)(1) and (d)(2) of this section:* **(2)** *If a condensate tank is used in the closed collection system, the tank shall meet the following requirements:*	**Finding** **GP does not monitor its condensate tanks to ensure they are operated with no detectable emissions.** During the on-site inspection, it appeared that GP was not monitoring the condensate tanks to ensure that they are operated with no detectable emissions. According to GP personnel, only the closed-vent systems are included on its monthly and annual leak detection and repair (LDAR) inspection route. NEIC requested additional information to determine whether GP is monitoring the condensate tanks themselves. In its April 10, 2015, response to NEIC (**CAA Appendix I**), GP stated that it monitors the blow heat condensate pump tank (pump tank in pine pulping process in **Appendix A**), stripper feed tank, and methanol storage tank. However, the tag numbers for the blow heat condensate pump tank and methanol storage	**Appendix A –** Process Description **CAA Appendix I** – GP April 10, 2015, Email **CAA Appendix J –** Site-Specific Inspection Plan

#	Regulatory Citation	Findings/Observations	Supporting Evidence
	(i) *The fixed roof and all openings (e.g., access hatches, sampling ports, gauge wells) shall be designed and operated with no detectable leaks as indicated by an instrument reading of less than 500 parts per million above background, and vented into a closed-vent system that meets the requirements in §63.450 and routed to a control device that meets the requirements in §63.443(d)…* **40 CFR § 63.453(l)(2)** *Each condensate tank used in the closed collection system shall be operated with no detectable leaks as specified in §63.446(d)(2)(i) measured initially and annually by the procedures specified in §63.457(d).*	tank are not listed in GP's current site-specific inspection plan (**CAA Appendix J**). Additionally, GP stated that it monitors the flame arrestor loop over the top of the stripper feed tank and methanol storage tank; it appears that GP is not monitoring the fixed roof and all openings on these condensate tanks.	
9.	**40 CFR § 63.445(b)** *The equipment at each bleaching stage, of the bleaching systems listed in paragraph (a) of this section, where chlorinated compounds are introduced shall be enclosed and vented into a closed-vent system and routed to a control device that meets the requirements specified in paragraph (c) of this section. The enclosures and closed-vent system shall meet the requirements specified in §63.450...* **40 CFR § 63.453(k)** *Each enclosure and closed-vent system used to comply with §63.450(a) shall comply with the requirements specified in paragraphs (k)(1) through (k)(6) of this section.* **(2)** *Each closed-vent system required by §63.450(a) shall be visually inspected every 30 days and at other times as requested by the Administrator. The visual inspection shall include inspection of ductwork, piping, enclosures, and connections to covers for visible evidence of defects.* **40 CFR §63.441 Definitions** Closed-vent system *means a system that is not open to the atmosphere and is composed of piping, ductwork, connections, and, if necessary, flow-*	**Finding** **The process equipment, required to be controlled in the bleach plant, is not being effectively routed to the control device, the bleach plant scrubber.** During a walkthrough of the bleach plant on February 6, 2015, NEIC inspectors observed a leak from the hardwood bleach plant scrubber booster fan, located on the roof of the bleach plant building. The booster fan draws a vacuum on all of the process equipment in the bleach plant that is controlled using the bleach plant scrubber. The liquid from the fan is condensed material from chlorinated HAP emissions (chlorine dioxide) from equipment in each bleaching stage. The process equipment required to be controlled in the bleach plant is not being effectively routed to the control device, the bleach plant scrubber. NEIC inspectors observed vapors emanating from the leaking booster fan, and also observed accumulated liquid on the roof of the bleach plant under and around the booster fan (**CAA Appendix A,** IMGP0077 and IMGP0078). The booster fan is part of the closed-vent system that is required to be periodically inspected. During the on-site inspection, NEIC inspectors were was unable to determine how long this leak had been occurring and whether it should have been found previously. NEIC requested additional information on repair and corrective actions associated with the hardwood bleach plant scrubber booster fan. In its April 10, 2015, response to NEIC (**CAA Appendix I**), GP stated that maintenance work performed on the hardwood bleach plant scrubber booster fan prior to the NEIC inspection included the following:	**CAA Appendix A –** CAA Photographs **CAA Appendix I** – GP April 10, 2015, Email

<table>
<tr><th>#</th><th>Regulatory Citation</th><th>Findings/Observations</th><th>Supporting Evidence</th></tr>
<tr><td></td><td>inducing devices that transport gas or vapor from an emission point to a control device.</td><td>• Tightened belts, aligned sheaves, and inspected fan on January 1, 2011.
• Replaced belts on January 1, 2013.
• Replaced entire fan wheel assembly, shaft and bearings, and seal behind fan housing; and balanced fan wheel on August 8, 2013.

Since the NEIC inspection, GP completed the installation of polyvinyl chloride drain lines on the hardwood bleach plant scrubber booster fan, as stated in its April 10, 2015, response to NEIC (CAA Appendix I). Additionally, GP is currently designing seal loops for the vent drain line from the hardwood bleach plant scrubber booster fan; it is unclear how this action ensures that emissions from process equipment in the bleach plant are routed to the control device.</td><td></td></tr>
<tr><td>10.</td><td>40 CFR § 63.443(d) The control device used to reduce total HAP emissions from each equipment system listed in paragraphs (a) and (b) of this section shall:

(3) Reduce total HAP emissions using a thermal oxidizer designed and operated at a minimum temperature of 871 °C (1600 °F) and a minimum residence time of 0.75 seconds;…

40 CFR § 63.443(e) Periods of excess emissions reported under §63.455 shall not be a violation of §63.443(c) and (d) provided that the time of excess emissions divided by the total process operating time in a semi-annual reporting period does not exceed the following levels:

(3) Four percent for control devices used to reduce the total HAP emissions from both the LVHC and HVLC systems.</td><td><u>Finding</u>
GP failed to reduce total HAP emissions by using the incinerator as required; there were periods of excess emissions exceeding 4 percent of the total operating time, during 3 of the semiannual periods evaluated.

Both LVHC and HVLC vent streams are routed to GP's incinerator. For the kraft process, the minimum temperature required for the reduction of total HAP emissions is 1600 °F, as required in 40 CFR §63.443(d)(3).

Based on the semiannual reports provided by GP (CAA Appendix K), there were three semiannual periods when GP exceeded the allowable 4 percent of excess emissions of the total operating time for the incinerator.

GP-Reported Percent Excess Emissions for Incinerator
<table><tr><th>Semiannual Period</th><th>GP-reported Excess Emissions</th></tr><tr><td>1/1/2012 – 6/30/2012</td><td>3.51%</td></tr><tr><td>7/1/2012 – 12/31/2012</td><td>3.26%</td></tr><tr><td>1/1/2013 – 6/30/2013</td><td>16.52%</td></tr><tr><td>7/1/2013 – 12/31/2013</td><td>11.25%</td></tr></table></td><td>CAA Appendix K – Summary Report – Gaseous and Opacity Excess Emission and Continuous Monitoring System Parameter Performance Report for Subpart S from January 2012 through December 2014</td></tr>
</table>

#	Regulatory Citation	Findings/Observations	Supporting Evidence
		1/1/2014 – 6/30/2014: 44.70% 7/1/2014 – 12/31/2014: 3.09%	
11.	**40 CFR § 63.457(a)** Performance tests. *Initial and repeat performance tests are required for the emissions sources specified in paragraphs (a)(1) and (2) of this section, except for emission sources controlled by a combustion device that is designed and operated as specified in §63.443(d)(3) or (4).* **(1)** *Conduct an initial performance test for all emission sources subject to the limitations in §§63.443, 63.444, 63.445, 63.446, and 63.447.* **(b)** Vent sampling port locations and gas stream properties. *For purposes of selecting vent sampling port locations and determining vent gas stream properties, required in §§63.443, 63.444, 63.445, and 63.447, each owner or operator shall comply with the applicable procedures in paragraphs (b)(1) through (b)(6) of this section.* **(5)** *To determine vent gas concentrations, the owner or operator shall conduct a minimum of three test runs that are representative of normal conditions and average the resulting pollutant concentrations using the following procedures.* **(ii)** *Except for the modifications specified in paragraphs (b)(5)(ii)(A) through (b)(5)(ii)(K) of this section, Method 26A of part 60, appendix A-8 shall be used to determine chlorine concentration in the vent stream.*	**Finding** **GP conducted its initial performance test for the bleach plant scrubber using unapproved test methodology to determine chlorine concentrations.** GP monitors the following parameters for its bleach plant scrubber: pH of the gas scrubber effluent, scrubber vent fan amperage (amps) instead of scrubber vent gas inlet flow rate, and scrubber liquid recirculation flow rate. GP monitors both the scrubber east and west fan amperage for redundancy, with only one fan in operation at one time. NEIC requested GP to provide the rationale and background documentation for operating parameter values, monitoring frequency, and averaging time it selected for its bleach plant scrubber. NEIC reviewed GP's initial performance test for the bleach plant scrubber (**CAA Appendix L**). According to the initial performance test, GP used the National Council for Air and Stream Improvement, Incorporated (NCASI) Special Report No. 92-01, "Method for Measuring Chlorine, Chlorine Dioxide, and Chloroform Gaseous Emissions," to determine chlorine, chlorine dioxide, and chloroform emissions. 40 CFR §63.457(b)(5)(ii) states that "…Method 26A of part 60, appendix A-8 shall be used to determine chlorine concentration in the vent stream." GP did not provide NEIC with any alternative method requests or approvals for using another method to determine chlorine concentration. In bleach plant scrubber's initial performance test (**CAA Appendix L**), the average pH value measured was 10.56. The parameter value for recirculation flow rate was not established in the bleach plant scrubber's initial performance test. Additionally, subsequent performance tests and parameter data provided by GP (**CAA Appendix M**) show recirculation flow rate values that range from 400 to 600 gallons per minute (gpm). GP's bleach plant scrubber initial performance test (**CAA Appendix L**) does not contain any background information that demonstrates how the parameter values for the scrubber fan vent amperage were established. The cover page of the initial performance test states the following: motor	**CAA Appendix L** – GP Bleach Plant Scrubber Initial Performance Test **CAA Appendix M** – GP Bleach Plant Scrubber Parameter Data, 2006 through 2014 **CAA Appendix N**– GP March 13, 2015, Email **CAA Appendix O** – June 5, 2015, Email and Subpart S and MM CMS Parameters Table

<table>
<tr><th>#</th><th>Regulatory Citation</th><th>Findings/Observations</th><th>Supporting Evidence</th></tr>
<tr><td></td><td></td><td>amperage was monitored, there is no load on motor at 15 amps, and the alarm range was set from 20 amps to 50 amps.

Bleach Plant Scrubber pH and Fan Amperage Parameter Values Contained in Initial Performance Test
<table>
<tr><th>Monitored Parameter</th><th>Lower Limit Parameter Value</th><th>Upper Limit Parameter Value</th></tr>
<tr><td>Scrubber gas effluent pH</td><td>10.56</td><td>NA</td></tr>
<tr><td>Scrubber east vent fan motor amperage</td><td>20 amperes</td><td>50 amperes</td></tr>
<tr><td>Scrubber west vent fan motor amperage</td><td>20 amperes</td><td>50 amperes</td></tr>
</table>
In its March 13, 2015, email to NEIC (CAA Appendix N), GP stated that it has not historically viewed its recent performance tests as information that must be incorporated into its Subpart S continuous monitoring parameters. GP also mentioned that it plans to conduct a performance test on its bleach plant scrubber in June 2015 and update its Subpart S compliance parameters based on those test results.

Additionally, GP reiterated in its June 5, 2015, response and in footnote 4 of its Subpart S and MM CMS parameters table (CAA Appendix O), that a Subpart S performance test would be conducted in June 2015 to update its compliance parameters for the bleach plant scrubber.</td><td></td></tr>
<tr><td>12.</td><td>40 CFR § 63.453(c) A CMS shall be operated to measure the following parameters for each gas scrubber used to comply with the bleaching system requirements of §63.445(c).

(1) The pH or oxidation/reduction potential of the gas scrubber effluent;

(2) The gas scrubber vent gas inlet flow rate; and

(3) The gas scrubber liquid influent flow rate.</td><td><u>Finding</u>
Using conditions from the initial performance test for GP’s bleach plant scrubber, NEIC’s data analysis showed exceedances of the established parameter values for the bleach plant scrubber pH and fan amperage.

GP did not establish the parameter values for the gas scrubber liquid influent flow rate in the initial performance test and an acceptable range of operation for the fan amperage.

As mentioned in AON 11 above, GP did not perform the initial performance test using approved EPA test methods for chlorine concentrations. GP uses different parametric values to demonstrate that</td><td>CAA Appendix O – June 5, 2015, Email and Subpart S and MM CMS Parameters Table

CAA Appendix K – Summary Report – Gaseous and Opacity Excess Emission and Continuous Monitoring System</td></tr>
</table>

<table>
<tr><th>#</th><th>Regulatory Citation</th><th>Findings/Observations</th><th>Supporting Evidence</th></tr>
<tr>
<td></td>
<td>40 CFR § 63.453(n) To establish or reestablish the value for each operating parameter required to be monitored under paragraphs (b) through (j)…each owner or operator shall use the following procedures:
(1) During the initial performance test required in § 63.457(a) or any subsequent performance test, continuously record the operating parameter.

40 CFR § 63.453(o) Each owner or operator of a control device subject to the monitoring provisions of this section shall operate the control device in a manner consistent with the minimum or maximum (as appropriate) operating parameter value or procedure required to be monitored under paragraphs (a) through (n) of this section and established under this subpart…operation of the control device below minimum operating parameter values or above maximum parameter values established under this subpart or failure to perform procedures required by this subpart shall constitute a violation of the applicable emission standard of this subpart and be reported as a period of excess emissions.</td>
<td>their bleach plant scrubber is operating properly. The tables below list each of the different parameters GP uses.

NEIC performed an electronic data analysis using pH values found in the improperly conducted performance test, as well as fan amperages mentioned in the submittal letter of the performance test. No electronic analysis was performed on the gas scrubber liquid influent flow rate as it is not mentioned in the initial performance test nor mentioned in the submittal letter.

NEIC requested GP to provide the rationale and background documentation for operating parameter values, monitoring frequency, and averaging time it selected for its bleach plant scrubber. GP's received approval from EPA Region 6 to monitor fan amps in lieu of vent gas inlet flow rate.

According to its Subpart S and MM CMS parameters table (CAA Appendix O) in its June 5, 2015, response to NEIC, GP stated that following parameter values were established via correspondence with EPA Region 6.

Bleach Plant Scrubber Parameter Values
Contained in June 5, 2015 Response
<table>
<tr><th>Monitored Parameter</th><th>Lower Limit Parameter Value</th><th>Upper Limit Parameter Value</th><th>Averaging Method</th></tr>
<tr><td>Scrubber gas effluent pH</td><td>9</td><td>NA</td><td>3-hour block average</td></tr>
<tr><td>Recirculation flow rate</td><td>50 gallons per minute (gpm)</td><td>NA</td><td>3-hour block average</td></tr>
<tr><td>Scrubber east vent fan motor amperage</td><td>15 amperes</td><td>50 amperes</td><td>3-hour block average</td></tr>
<tr><td>Scrubber west vent fan motor amperage</td><td>15 amperes</td><td>50 amperes</td><td>3-hour block average</td></tr>
</table>
However, during the on-site inspection, GP representatives stated that the parameter values it uses to determine compliance with its bleaching systems requirements are contained in its semiannual reports (CAA Appendix K), as shown in the table below. The parameter values for the</td>
<td>Parameter Performance Report for Subpart S from January 2012 through December 2014

CAA Appendix P – NEIC Analysis of Bleach Plant Scrubber Continuous Monitoring Data

CAA Appendix L – GP Bleach Plant Scrubber Initial Performance Test

Discussions with GP representatives</td>
</tr>
</table>

<table>
<tr><th>#</th><th>Regulatory Citation</th><th>Findings/Observations</th><th>Supporting Evidence</th></tr>
<tr><td></td><td></td><td>
scrubber east and west vent fan motor amperage are inconsistent with the parameter values listed in GP's June 5, 2015, response to NEIC (CAA Appendix O).

Bleach Plant Scrubber Parameter Values
Contained in Semiannual Reports
<table>
<tr><th>Monitored Parameter</th><th>Lower Limit Parameter Value</th><th>Upper Limit Parameter Value</th><th>Averaging Method</th></tr>
<tr><td>Scrubber gas effluent pH</td><td>9</td><td>NA</td><td>3-hour block average</td></tr>
<tr><td>Recirculation flow rate</td><td>50 gpm</td><td>NA</td><td>3-hour block average</td></tr>
<tr><td>Scrubber east vent fan motor amperage</td><td>15 amperes</td><td>55 amperes</td><td>3-hour block average</td></tr>
<tr><td>Scrubber west vent fan motor amperage</td><td>15 amperes</td><td>55 amperes</td><td>3-hour block average</td></tr>
</table>

In its June 5, 2015, response (CAA Appendix O), GP stated that it was unable to locate the stack test or other background documentation to support the parameter values for the bleach plant scrubber pH and scrubber liquid recirculation flow rate.

GP provided 1-minute continuous monitoring data for its bleach plant scrubber parameters from January 1, 2012, through February 5, 2015. Although, GP did not conduct its initial performance test according to the requirements of 40 CFR Part 63 Subpart S (AON 11), NEIC used the parameter values in GP's initial performance test in its data analysis.

As part of NEIC's analysis, 3-hour block averages were calculated as a comparison to the calculation method used by GP (CAA Appendix P). For scrubber east and west fan amps, NEIC compared the 3-hour block averages to the parameter values listed in GP's bleach plant scrubber initial performance test (CAA Appendix L). Additionally, NEIC only counted instances when the 3-hour block averages for both the scrubber vent east fan amps and scrubber vent west fan amps were both outside the established parameter values (CAA Appendix P).
</td><td></td></tr>
</table>

<table>
<tr><th>#</th><th>Regulatory Citation</th><th>Findings/Observations</th><th>Supporting Evidence</th></tr>
<tr><td></td><td></td><td>
For the scrubber effluent pH, NEIC compared the 3-hour block averages to the parameter value (10.56) listed in GP's bleach plant scrubber initial performance test (CAA Appendix L) instead of the pH value (9.0) used by GP, as GP could not locate background documentation for its scrubber effluent pH parameter value.

NEIC did not perform a data analysis on continuous monitoring data for the bleach plant recirculation flow rate, as GP was unable to locate or provide background documentation to support the parameter value it uses. In addition, it is unclear if the bleach plant recirculation flow rate used by GP is the gas scrubber liquid influent flow rate required to be monitored by 40 CFR 63.453(c)(3).

Bleach Plant Scrubber
NEIC Data Analysis of 3-Hour Block Average
Parameter Values Outside
Established Operating Ranges in Initial Performance Test
<table>
<tr><th>Semiannual Period</th><th>20 Amps < Scrubber Fan Amperage< 50 Amps</th><th>pH >10.56</th></tr>
<tr><td>1/1/2012 – 6/30/2012</td><td>0</td><td>1,391</td></tr>
<tr><td>7/1/2012 – 12/31/2012</td><td>0</td><td>1,471</td></tr>
<tr><td>1/1/2013 – 6/30/2013</td><td>4</td><td>1,379</td></tr>
<tr><td>7/1/2013 – 12/31/2013</td><td>0</td><td>1,388</td></tr>
<tr><td>1/1/2014 – 6/30/2014</td><td>0</td><td>1,359</td></tr>
<tr><td>7/1/2014 – 12/31/2014</td><td>0</td><td>1,443</td></tr>
<tr><td>1/1/2015 – 6/3/0/2015[1]</td><td>0</td><td>281</td></tr>
<tr><td>TOTAL</td><td>4</td><td>8,993</td></tr>
<tr><td colspan="3">[1] Data analysis for this semiannual period is for continuous monitoring data from 1/1/2015 – 2/5/2015.</td></tr>
</table>
</td><td></td></tr>
</table>

<table>
<tr><th>#</th><th>Regulatory Citation</th><th>Findings/Observations</th><th>Supporting Evidence</th></tr>
<tr><td></td><td></td><td>The initial performance test report does not contain the fan amperage range used throughout each test run. The transmittal letter for the initial performance test states that the alarm setpoints for the fan amps were 20 to 50 and the average fan amperage was 37. NEIC chose to use the 20 to 50 range for its comparison, although the test report does not establish the actual operational range for the fan amperage.</td><td></td></tr>
<tr><td>13.</td><td>40 CFR § 63.453(o) …operation of the control device below minimum operating parameter values or above maximum parameter values established under this subpart or failure to perform procedures required by this subpart shall constitute a violation of the applicable emission standard of this subpart and be reported as a period of excess emissions.

40 CFR § 63.455(a) Each owner or operator of a source subject to this subpart shall comply with the reporting requirements of Subpart A of this part as specified in table 1…

Table 1 to Subpart S of Part 63 – General Provisions Applicability to Subpart S

<table><tr><th>General provisions reference</th><th>Applies to Subpart S</th><th>Comment</th></tr><tr><td>…63.10(e)(3)</td><td>Yes</td><td></td></tr></table>
40 CFR § 63.10(e)(3) Excess emissions and continuous monitoring system performance report and summary report.
(i) Excess emissions and parameter monitoring exceedances are defined in the relevant standards. The owner or operator of an affected source required to install a CMS by a relevant standard shall submit an excess emissions and continuous monitoring system performance report to the Administrator semiannually…</td><td><u>Finding</u>
GP did not report any instances when the bleach plant scrubber was operated outside the established parameter values.

GP did not report any instances when the bleach plant scrubber was operated outside the established parameter values from January 1, 2012, through February 5, 2015, based on NEIC’s review of GP’s “Summary Report – Gaseous and Opacity Excess Emission and Continuous Monitoring System Parameter Performance Report” (CAA Appendix K).</td><td>CAA Appendix K– Summary Report – Gaseous and Opacity Excess Emission and Continuous Monitoring System Parameter Performance Report for Subpart S from January 2012 through December 2014</td></tr>
</table>

#	Regulatory Citation	Findings/Observations	Supporting Evidence
	AREAS OF CONCERN		
A.	**40 CFR § 63.453(k)** *Each enclosure and closed-vent system used to comply with §63.450(a) shall comply with the requirements specified in paragraphs (k)(1) through (k)(6) of this section.* **(2)** *Each closed-vent system required by §63.450(a) shall be visually inspected every 30 days and at other times as requested by the Administrator. The visual inspection shall include inspection of ductwork, piping, enclosures, and connections to covers for visible evidence of defects.* **(6)** *If an inspection required by paragraphs (k)(1) through (k)(5) of this section identifies visible defects in ductwork, piping, enclosures or connections to covers required by §63.450, or if an instrument reading of 500 parts per million by volume or greater above background is measured, or if enclosure openings are not maintained at negative pressure, then the following corrective actions shall be taken as soon as practicable.* **(i)** *A first effort to repair or correct the closed-vent system shall be made as soon as practicable but no later than 5 calendar days after the problem is identified.* **(ii)** *The repair or corrective action shall be completed no later than 15 calendar days after the problem is identified.* **Permit No. 0597-AOP-R15** **Pulp Mill Operations, Line 1 Washer and (SN-33) and Line 2 Washer (SN-34), Condition 74**…*As part of an alternative monitoring requirement approved by EPA, a copy of which is located in Appendix I, the permittee shall comply with the following:* **(e)** *In lieu of monthly visual monitoring, the permittee shall conduct monthly Method 21 monitoring of leaks found around the feed and exit roll seals and along the side gaskets of the washers.*	**Concern** **Although GP is complying with an alternative monitoring request approved by EPA Region 6, there are visible defects on the GP-2 and GP-3 washers, resulting in emissions to the atmosphere.** GP performs monthly Method 21 monitoring on its GP-2 and GP-3 washers instead of monthly visual inspections, as required by 40 CFR § 63.453(k). GP submitted a request for alternative monitoring to EPA Region 6 in a letter dated August 18, 2003 (**CAA Appendix Q**). This request was approved by EPA Region 6 in a letter dated December 10, 2003 (**CAA Appendix R**) and subsequently incorporated into GP's Title V permit. The washers are part of GP's pulp washing system, which is required to be enclosed, vented to a closed-vent system, and routed to a control device [40 CFR § 63.443(a)(1)(iii)]. In its alternative monitoring request, GP asserted that preliminary testing showed that fugitive leaks from the washer were below 500 ppm, the leak definition for components of the closed-vent system, as required in 40 CFR §63.450(c). Based on the visible defects and emissions from the washers observed by NEIC inspectors on February 5, 2015 (see AON 2 of Subpart BB and Subpart S), GP should be performing monthly visual inspections. The pulp washing system is part of the HVLC system; therefore, instrument readings are expected to be below 500 ppm because of the low concentration, but high volume, of HAP emissions contained in the gas streams from the washers. It appears that the GP's monthly Method 21 monitoring is not triggering the corrective actions needed to repair the visual defects observed by NEIC inspectors during the on-site inspection.	**CAA Appendix Q** – August 18, 2003, Alternative Monitoring Request for Pulp Washing System **CAA Appendix R** – December 10, 2003, Approval of Alternative Monitoring Request for Pulp Washing System

#	Regulatory Citation	Findings/Observations	Supporting Evidence
B.		**Concern** **The vacuum pulled on GP's HVLC header system is not adequately capturing HVLC vent streams from process equipment.** During process discussions, GP representatives stated that the pressate tank in the pulp mill vents to the HVLC gas cooler. However, during a walkthrough of the process area on February 5, 2015, NEIC inspectors observed a hole on the top of the pressate tank, which collects spent liquor from the screw press and is part of the knotter system. Visible emissions were observed emanating from the pressate tank (**CAA Appendix A,** IMGP0074). Additionally, the tank has an overflow line that would discharge into the sewer in an overflow event. Visible vapor emissions were observed from the overflow line as well. These visible emissions indicate that insufficient vacuum is being pulled from the HVLC collection system to adequately control emissions from the pressate tank. Many of the vessels associated with the pulping system (especially the hardwood line process equipment) are vented to the HVLC system. These vessels were observed to have elbow vents that are open to the atmosphere instead of conservation vents or pressure/vacuum breakers. Theoretically, when the HVLC system is working properly, a vacuum will be continuously pulled on these vessels, and, therefore, air will be pulled in through the vents. Based on the observed emissions from the pressate tank, it is possible that the HVLC system is not continuously pulling enough vacuum to adequately control emissions from process equipment.	**CAA Appendix A –** CAA Photographs Discussions with GP representatives
C.		**Concern** **Emissions were released from the D2 standpipe at the 1A bleach plant.** During a walkthrough of the 1A line of the bleach plant on February 6, 2015, NEIC inspectors observed vapors emanating from the D2 standpipe (**CAA Appendix A,** IMGP0079). It is unclear whether or not the standpipe is part of a bleaching stage; however, there should be a seal in the standpipe that prevents emissions from escaping. Clearly, the seal was broken, and emissions were escaping from the D2 standpipe.	**CAA Appendix A –** CAA Photographs
D.		**Concern** **GP may not be conducting leak detection and monitoring on all components of its closed-vent system.** Based on NEIC's observations made during plant walkthroughs, discussions with GP representatives, and review of GP's site-specific inspection plan (**CAA Appendix J**), GP is potentially not conducting leak	**CAA Appendix J –** Site-Specific Inspection Plan **CAA Appendix D** – GP February 20, 2015, Email

#	Regulatory Citation	Findings/Observations	Supporting Evidence
		detection and monitoring on all potential components of its closed-vent system. During walkthroughs of process areas, NEIC inspectors observed vapors emanating from process equipment in the digester, pulp washing, and bleaching systems that are required to be controlled and routed to a control device. Based on discussions with GP representatives and review of GP's site-specific inspection plan, GP is primarily conducting its annual and monthly inspections of its closed-vent system on lines that are part of its LVHC and HVLC systems, and not on components on process equipment. In its February 20, 2015, response to NEIC (**CAA Appendix D**), GP stated that it believes that the leak detection and monitoring provisions of 40 CFR § 63.453(k) do not apply to the process equipment. Additionally, GP believes that its closed-vent system starts where its NCG lines connect to the tertiary condenser in the digester system.	Discussions with GP representatives
E.		**Concern** **GP submitted a self-disclosure to ADEQ, stating that it is not meeting the required collection and treatment requirements for kraft pulping process condensates.** Item #11 of a disclosure of potential environmental noncompliance that GP submitted to the ADEQ on January 15, 2015 (**CAA Appendix B**) discusses GP's pulping process condensate collection and destruction system. In this self-disclosure document, GP stated that its existing emission calculations and factors concerning HAP concentrations in pulping process condensate collection and destruction system need to be updated. According to regulatory discussions with GP representatives during the on-site inspection, density meters located near the methanol storage tank, where methanol is stored before it is incinerated, indicated that GP has not been collecting as much methanol as it historically thought it was. GP planned to conduct an internal study to identify operational parameters that may affect its steam stripper, which removes organics (mainly methanol) from foul condensates generated in the pulp mill, as stated in its January 15, 2015, self-disclosure document (**CAA Appendix B**). Additionally, in its March 16, 2015, update (**CAA Appendix S**) to its January 15, 2015, self-disclosure document, GP stated that it plans to conduct a new performance test to re-establish continuous monitoring system parameters for its steam stripper. GP admits that it has not been	**CAA Appendix B** – GP January 15, 2015, Self-Disclosure **CAA Appendix S** – GP March 16, 2015, Update to Self-Disclosure Discussions with GP representatives

#	Regulatory Citation	Findings/Observations	Supporting Evidence
		meeting the required collection and treatment requirements for kraft pulping process condensates. GP plans to identify past periods during which the amount of methanol removed in its steam stripper fell below the required amount of 10.2 pounds per ton of ODP specified in 40 CFR §63.446(e)(5), which is the treatment option chosen by GP for its kraft pulping process condensates.	
	40 CFR Part 63 Subpart MM – National Emission Standards for Hazardous Air Pollutants for Chemical Recovery Combustion Sources at Kraft, Soda, Sulfite, and Stand-Alone Semichemical Pulp Mills		
	AREA OF NONCOMPLIANCE		
1.	**40 CFR § 63.864(j) Determination of operating ranges** **(1)** *During the initial performance test required in §63.865, the owner or operator of any affected source or process unit must establish operating ranges for the monitoring parameters in paragraphs (e)(10) through (14) of this section as appropriate…* **(3)** *The owner or operator of an affected source or process unit may establish expanded or replacement operating ranges for the monitoring parameter values listed in paragraphs (e)(10) through (14) of this section and established in paragraph (j)(1) or (2) of this section during subsequent performance tests using the test methods in §63.865.*	**Finding** **GP is not using operating ranges established in its initial performance tests for the smelt dissolving tank scrubbers to determine compliance with the monitoring requirements of 40 CFR § 63.864(j).** NEIC requested that GP provide the performance tests that established the lime kiln scrubber, smelt dissolving tank east scrubber, and smelt dissolving tank west scrubber operating ranges used to determine compliance with the monitoring requirements of 40 CFR § 63.864(j). The initial performance test provided by GP for the smelt dissolving tank scrubbers contains operating ranges that are inconsistent with the operating ranges used by GP (**CAA Appendix T)**. In its June 5, 2015 response to NEIC, GP provided its Subpart S and MM CMS parameters table (**CAA Appendix O**), which contains the operating ranges that it uses to comply with 40 CFR 63 Subpart MM monitoring requirements. The initial performance test, (**CAA Appendix T**) that GP provided for the smelt dissolving tank east scrubber and smelt dissolving tank west scrubber, states that the performance test was conducted for 40 CFR Part 60 Subpart BB, and not for 40 CFR Part 63 Subpart MM. However, the emission limits in 40 CFR Part 60 Subpart BB are the same as the emission limits in 40 CFR Part 63 Subpart MM, therefore NEIC used the parametric monitoring established by the Subpart BB test to determine compliance with Subpart MM requirements.	**CAA Appendix T** – GP September 17, 2004, Performance Test for Smelt Dissolving Tank East and West Scrubbers **CAA Appendix U** – GP August 6, 2004 Initial Performance Test for Lime Kiln Scrubber **CAA Appendix O** – June 5, 2015, Email and Subpart S and MM CMS Parameters Table

<table>
<tr><th>#</th><th>Regulatory Citation</th><th>Findings/Observations</th><th>Supporting Evidence</th></tr>
<tr><td></td><td></td><td>
Lime Kiln Scrubber Operating Ranges
<table>
<tr><th>Monitored Parameter</th><th>June 5, 2015 Response</th><th>August 6, 2004 Initial Performance Test</th></tr>
<tr><td>Pressure drop</td><td>> 24 inches of water</td><td>> 24 inches of water</td></tr>
<tr><td>Scrubber flow rate</td><td>> 620 gpm</td><td>> 620 gpm</td></tr>
</table>
Smelt Dissolving Tank East Scrubber Operating Ranges
<table>
<tr><th>Monitored Parameter</th><th>June 5, 2015 Response</th><th>September 17, 2004 Performance Test</th></tr>
<tr><td>Pressure drop</td><td>> 5 inches of water</td><td>> 5 inches of water</td></tr>
<tr><td>Scrubber flow rate</td><td>> 140 gpm</td><td>> 145.70 gpm</td></tr>
</table>
Smelt Dissolving Tank West Scrubber Operating Ranges
<table>
<tr><th>Monitored Parameter</th><th>June 5, 2015 Response</th><th>September 17, 2004 Performance Test</th></tr>
<tr><td>Pressure drop</td><td>> 5 inches of water</td><td>> 5 inches of water</td></tr>
<tr><td>Scrubber flow rate</td><td>> 140 gpm</td><td>> 152.37 gpm</td></tr>
</table>
</td><td></td></tr>
<tr><td>2.</td><td>40 CFR § 63.864(k)(1) – Following the compliance date, owners or operators of all affected sources or process units are required to implement corrective action if the monitoring exceedances in paragraphs (k)(1)(i) through (vi) of this section occur:

40 CFR § 63.864(k)(1)(ii) For a new or existing kraft or soda recovery furnace, kraft or soda smelt dissolving tank, kraft or soda lime kiln… with a wet scrubber, when any 3-hour average parameter value is outside the established parameter values established in paragraph (j) of this section.

40 CFR § 63.864(k)(2) – Following the compliance date, owners or operators of all affected sources or process units are in violation of the standards of §63.862 if the monitoring exceedances in paragraphs (k)(2)(i) through (vii) of this section occur…</td><td><u>Finding</u>
NEIC identified six or more monitoring exceedances, in separate 24-hour periods, in 6-month reporting periods, from 2012 through 2014 and part of 2015, for the lime kiln scrubber and smelt dissolving tank scrubbers.

According to the regulatory requirement in 40 CFR § 63.864(k)(1)(ii), a monitoring exceedance occurs “when any 3-hour average value is outside the range of parameter values established….” According to discussions with GP representatives, GP is interpreting “any 3-hour average value” as a 3-hour block average.

GP provided NEIC continuous parameter monitoring system data in 1-minute intervals for pressure drop and scrubber liquid flow rate for its lime kiln scrubber, smelt dissolving tank east scrubber, and smelt dissolving tank west scrubber for the period of January 1, 2012, through February 5, 2015.

As part of NEIC’s analysis (CAA Appendix V), 3-hour block averages were calculated to determine whether GP’s lime kiln scrubber and smelt</td><td>CAA Appendix V – NEIC Analysis of Lime Kiln Scrubber, Smelt Dissolving Tank East Scrubber, and Smelt Dissolving Tank West Scrubber Continuous Monitoring Data using 3-Hour Block Averages

CAA Appendix T – GP September 17, 2004, Performance Test for Smelt Dissolving Tank East and West Scrubbers</td></tr>
</table>

<table>
<tr><th>#</th><th>Regulatory Citation</th><th>Findings/Observations</th><th>Supporting Evidence</th></tr>
<tr>
<td></td>
<td>40 CFR § 63.864(k)(2)(iii) For a new or existing kraft or soda recovery furnace, kraft or soda smelt dissolving tank, kraft or soda lime kiln, or sulfite combustion unit equipped with a wet scrubber, when six or more 3-hour average parameter values within any 6-month reporting period are outside the range of values established in paragraph (j) of this section;

40 CFR § 63.864(k)(3) For purposes of determining the number of nonopacity monitoring exceedances, no more than one exceedance will be attributed in any given 24-hour period.</td>
<td>dissolving tank scrubbers were operating within established operating ranges. NEIC then compared the 3-hour block averages to the operating ranges listed in GP's initial performance tests (CAA Appendices T and U) for the lime kiln scrubber and smelt dissolving tank scrubbers.

The initial performance test, (CAA Appendix T) that GP provided for the smelt dissolving tank scrubbers, states that the performance test was conducted for 40 CFR Part 60 Subpart BB , and not for 40 CFR Part 63 Subpart MM.

However, the emission limits in 40 CFR Part 60 Subpart BB are the same as the emission limits in 40 CFR Part 63 Subpart MM, therefore NEIC used the parametric monitoring established by the Subpart BB test to determine compliance with Subpart MM requirements.

NEIC identified 6-month reporting periods when six or more 24-hour periods contained a 3 hour block average that was outside established operating ranges for the lime kiln scrubber, smelt dissolving tank east scrubber, and smelt dissolving tank west scrubber. The number of 24-hour periods with 3-hour block average parameter values outside of established operating parameter are listed for each 6-month reporting period.

Number of 24-Hour Periods when at least One Parameter Value is Outside Established Operating Ranges in Initial Performance Test for Lime Kiln Scrubber
<table>
<tr><th rowspan="2">6-Month Reporting Period</th><th>Number of 24-Hour Periods</th></tr>
<tr><th>Scrubber flow rate > 620 gpm

Pressure drop > 24 inches H_2O</th></tr>
<tr><td>1/1/2012 – 6/30/2012</td><td>6</td></tr>
<tr><td>7/1/2012 – 12/31/2012</td><td>7</td></tr>
<tr><td>1/1/2013 – 6/30/2013</td><td>7</td></tr>
<tr><td>7/1/2013 – 12/31/2013</td><td>4</td></tr>
<tr><td>1/1/2014- 6/30/2014</td><td>5</td></tr>
<tr><td>7/1/2014 – 12/31/2014</td><td>1</td></tr>
<tr><td>1/1/2015 – 6/30/2015[1]</td><td>3</td></tr>
<tr><td colspan="2">[1] Data analysis for this 6-month period is for continuous monitoring data from 1/1/2015 – 2/5/2015.</td></tr>
</table>
</td>
<td>CAA Appendix U – GP August 6, 2004, Initial Performance Test for Lime Kiln Scrubber

CAA Appendix O – June 5, 2015, Email and Subpart S and MM CMS Parameters Table

Discussions with GP representatives</td>
</tr>
</table>

<table>
<tr><th>#</th><th>Regulatory Citation</th><th>Findings/Observations</th><th>Supporting Evidence</th></tr>
<tr><td></td><td></td><td>
Number of 24-Hour Periods when at least One Parameter Value is Outside Established Operating Ranges in Initial Performance Test for Smelt Dissolving Tank Scrubbers
<table>
<tr><th rowspan="3">6-Month Reporting Period</th><th colspan="2">Number of 24-Hour Periods</th></tr>
<tr><th>Smelt Dissolving Tank East Scrubber</th><th>Smelt Dissolving Tank West Scrubber</th></tr>
<tr><th>Scrubber flow rate > 145.70 gpm

Pressure drop > 5 inches H_2O</th><th>Scrubber flow rate > 152.37 gpm

Pressure drop > 5 inches H_2O</th></tr>
<tr><td>1/1/2012 – 6/30/2012</td><td>26</td><td>52</td></tr>
<tr><td>7/1/2012 – 12/31/2012</td><td>25</td><td>81</td></tr>
<tr><td>1/1/2013 – 6/30/2013</td><td>63</td><td>108</td></tr>
<tr><td>7/1/2013 – 12/31/2013</td><td>12</td><td>85</td></tr>
<tr><td>1/1/2014- 6/30/2014</td><td>23</td><td>105</td></tr>
<tr><td>7/1/2014 – 12/31/2014</td><td>29</td><td>80</td></tr>
<tr><td>1/1/2015 – 6/30/2015[1]</td><td>22</td><td>21</td></tr>
<tr><td colspan="3">[1] Data analysis for this 6-month period is for continuous monitoring data from 1/1/2015 – 2/5/2015.</td></tr>
</table>
</td><td></td></tr>
<tr><td>3.</td><td>40 CFR § 63.867(c) – Excess emissions report. The owner or operator must report quarterly if measured parameters meet any of the conditions specified in paragraph (k)(1) or (2) of § 63.864. This report must contain the information specified in § 63.10(c) of this part as well as the number and duration of occurrences when the source met or exceeded the conditions in § 63.864(k)(1), and the number and duration of occurrences when the source met or exceeded the conditions in § 63.864(k)(2).

40 CFR § 63.864(k)(1) – Following the compliance date, owners or operators of all affected sources or process units are required to implement corrective action if the monitoring exceedances in paragraphs (k)(1)(i) through (vi) of this section occur:

40 CFR § 63.864(k)(1)(ii) For a new or existing kraft or soda recovery furnace, kraft or soda smelt dissolving tank, kraft or soda lime kiln… with a wet scrubber, when any 3-hour average parameter value</td><td><u>Finding</u>
GP did not report any monitoring exceedances for its lime kiln scrubber, smelt dissolving tank east scrubber, or smelt dissolving tank west scrubber.

Based on NEIC’s review of GP’s “Summary Report – Excess Emission and Continuous Monitoring System Parameter Performance Report” for Subpart MM (CAA Appendix W) for 2012 through 2014, GP did not report any 24-hour periods (referred to as “daily events in GP’s Subpart MM reports) when 3-hour block average parameter values were outside operating ranges, except for startup, shutdown, and malfunction (SSM) events, for the lime kiln scrubber, smelt dissolving tank east scrubber, and smelt dissolving tank west scrubber.</td><td>CAA Appendix W – Summary Report – Excess Emission and Continuous Monitoring System Parameter Performance Report for Subpart MM from January 2012 through December 2014</td></tr>
</table>

#	Regulatory Citation	Findings/Observations	Supporting Evidence
	is outside the established parameter values established in paragraph (j) of this section. **40 CFR § 63.864(k)(2)** – *Following the compliance date, owners or operators of all affected sources or process units are in violation of the standards of §63.862 if the monitoring exceedances in paragraphs (k)(2)(i) through (vii) of this section occur…* **40 CFR § 63.864(k)(2)(iii)** *For a new or existing kraft or soda recovery furnace, kraft or soda smelt dissolving tank, kraft or soda lime kiln, or sulfite combustion unit equipped with a wet scrubber, when six or more 3-hour average parameter values within any 6-month reporting period are outside the range of values established in paragraph (j) of this section;* **40 CFR § 63.864(k)(3)** *For purposes of determining the number of nonopacity monitoring exceedances, no more than one exceedance will be attributed in any given 24-hour period.*		
	ADEQ Air Operating Permit No.: 0597-AOP-R15		
	AREAS OF NONCOMPLIANCE		
1.	**Lime Kiln (SN-25)** **CAM** **Condition 125.** *The Lime Kiln (SN-25) is subject to and shall comply with all applicable provisions of Regulation 19, 30 CFR Part 52 Subpart E, and Part §64.6 for Compliance Assurance Monitoring…* **Condition 125a.** *The permittee shall maintain caustic liquid flow rate in the scrubber of at least 500 gallons per minute.* **Condition 125b**. *The permittee shall maintain a gas pressure drop of at least 25 inches of water.* **Condition 125c.** *...Compliance shall be based upon a 3-hr average. Records shall be kept onsite and made available to the Department upon request.*	**Finding** **NEIC identified 3-hour block averages that were outside the Title V operating ranges for the lime kiln scrubber from 2012 through February 2015.** Condition 125 contains limits for the lime kiln scrubber flow rate and pressure drop under the Compliance Assurance Monitoring provisions for the lime kiln. The operating ranges listed in GP's Title V permit for the lime kiln scrubber are different from the operating ranges contained in its performance tests for the lime kiln scrubber. Additionally, Condition 125c of the Title V permit states that compliance is based upon a "3-hr average." According to discussions with GP representatives, GP is interpreting "any 3-hour average value" as a 3-hour block average.	**CAA Appendix C** – Select Pages of Title V Permit **CAA Appendix X** – NEIC Analysis of Lime Kiln using Limits in Title V Permit **CAA Appendix N**– GP March 13, 2015, Email **CAA Appendix O** – June 5, 2015, Email and Subpart

#	Regulatory Citation	Findings/Observations	Supporting Evidence
		Lime Kiln Scrubber Operating Ranges **Monitored Parameter** / **Title V Permit** / **August 6, 2004 Initial Performance Test** Pressure drop / > 25 inches of water / > 24 inches of water Scrubber flow rate / > 500 gpm / > 620 gpm As part of NEIC's analysis (**CAA Appendix X**), 3-hour block averages were calculated to determine whether GP's lime kiln scrubber was operating within operating range contained in its Title V permit. NEIC identified the following number of 3-hour block averages that were outside the operating ranges contained in GP's Title V permit for its lime kiln scrubber: **3-hour Block Average Parameter Values Outside Established Operating Ranges in Title V Permit for Lime Kiln Scrubber** **Period** / **Pressure drop > 25 inches H_2O** / **Scrubber flow rate > 500 gpm** 1/1/2012 – 6/30/2012 / 28 / 2 7/1/2012 – 12/31/2012 / 24 / 2 1/1/2013 – 6/30/2013 / 35 / 0 7/1/2013 – 12/31/2013 / 12 / 1 1/1/2014- 6/30/2014 / 10 / 2 7/1/2014 – 12/31/2014 / 2 / 1 1/1/2015 – 2/5/2015 / 6 / 0 NEIC requested an explanation as to why the operating ranges contained in GP's performance tests for the lime kiln scrubber, smelt dissolving tank east scrubber, and smelt dissolving tank west scrubber are different from the operating ranges listed in its Title V permit (**CAA Appendix C**). In its March 13, 2015, email to NEIC (**CAA Appendix N)**, GP stated that the Title V permit limits for its lime kiln scrubber have been established since at least June 29, 1999. GP stated that it plans to use its upcoming Title V permit renewal process to update its permit limits to reflect available performance test data. GP reiterated in its June 5, 2015 response to NEIC and in its Subpart S and MM CMS parameters table (**CAA Appendix O**), that it plans to utilize its upcoming Title V permit renewal process to update its Title V permit limits	S and MM CMS Parameters Table Discussions with GP representatives

<table>
<tr><th>#</th><th>Regulatory Citation</th><th>Findings/Observations</th><th>Supporting Evidence</th></tr>
<tr><td></td><td></td><td>to be consistent with operating ranges used to determine compliance with 40 CFR Part 63 Subpart MM.</td><td></td></tr>
<tr><td>2.</td><td>Smelt Dissolving Tanks (SN-27A and SN-27B) Condition 114
…The scrubber liquid flow rate and the gas pressure drop across the unit shall be measured hourly and compliance shall be based upon the daily average of these measurements. The results shall be kept on site and be available to the Department personnel upon request…

<table>
<tr><th>SN</th><th>Control equipment</th><th>Parameter</th><th>Units</th><th>Operation Limits (minimum)</th></tr>
<tr><td rowspan="2">27A</td><td rowspan="2">scrubber</td><td>liquid flow rate</td><td>gal/min</td><td>135</td></tr>
<tr><td>gas pressure drop across unit</td><td>inches H_2O</td><td>5</td></tr>
<tr><td rowspan="2">27B</td><td rowspan="2">scrubber</td><td>liquid flow rate</td><td>gal/min</td><td>135</td></tr>
<tr><td>gas pressure drop across unit</td><td>inches H_2O</td><td>5</td></tr>
</table></td><td><u>Finding</u>
NEIC identified daily average parameter values that were outside Title V permit operating ranges for the smelt dissolving tank scrubbers from 2012 through February 2015.

Condition 114 of GP's Title V permit contains operating ranges for the smelt dissolving tank scrubbers' flow rate and pressure drop under the "Scrubber Monitoring Requirements" provisions. The operating ranges listed in GP's Title V permit for the smelt dissolving tank scrubbers are different from the operating ranges contained in its performance tests for the lime kiln scrubber.

GP is using daily averages to determine compliance with its Title V monitoring requirements. The operating ranges listed in GP's Title V permit for the smelt dissolving tank scrubbers are different from the operating ranges contained in its initial performance tests.

Smelt Dissolving Tank East Scrubber Operating Ranges
<table>
<tr><th>Monitored Parameter</th><th>Title V Permit</th><th>September 17, 2004 Performance Test</th></tr>
<tr><td>Pressure drop</td><td>> 5 inches of water</td><td>> 5 inches of water</td></tr>
<tr><td>Scrubber flow rate</td><td>> 135 gpm</td><td>> 145.70 gpm</td></tr>
</table>
Smelt Dissolving Tank West Scrubber Operating Ranges
<table>
<tr><th>Monitored Parameter</th><th>Title V Permit</th><th>September 17, 2004 Performance Test</th></tr>
<tr><td>Pressure drop</td><td>> 5 inches of water</td><td>> 5 inches of water</td></tr>
<tr><td>Scrubber flow rate</td><td>> 135 gpm</td><td>> 152.37 gpm</td></tr>
</table>
For its analysis (CAA Appendix Y), NEIC calculated daily averages for the smelt dissolving tank scrubber flow rate and pressure drop and compared these daily averages to the operating ranges listed in GP's Title V permit. For the smelt dissolving tank east scrubber, GP did not operate it outside the permitted operating range for pressure drop. For the smelt dissolving tank east scrubber flow rate and smelt dissolving tank west</td><td>CAA Appendix C – Select Pages of Title V Permit

CAA Appendix Y – NEIC Analysis of Smelt Dissolving Tank Scrubbers Continuous Monitoring Data using Daily Averages and Title V Permit Limits

CAA Appendix O – June 5, 2015 Email and Subpart S and MM CMS Parameters Table</td></tr>
</table>

<table>
<tr><th>#</th><th>Regulatory Citation</th><th>Findings/Observations</th><th>Supporting Evidence</th></tr>
<tr><td></td><td></td><td>scrubber flow rate and pressure drop, NEIC identified the following daily averages that were outside parameter values.

Daily Average Parameter Values Outside Established Operating Ranges for Smelt Dissolving Tank East Scrubber
<table>
<tr><th rowspan="2">Period</th><th>Operating Range from Title V Permit</th></tr>
<tr><th>Scrubber flow rate > 135 gpm</th></tr>
<tr><td>1/1/2012 – 6/30/2012</td><td>0</td></tr>
<tr><td>7/1/2012 – 12/31/2012</td><td>0</td></tr>
<tr><td>1/1/2013 – 6/30/2013</td><td>7</td></tr>
<tr><td>7/1/2013 – 12/31/2013</td><td>1</td></tr>
<tr><td>1/1/2014- 6/30/2014</td><td>0</td></tr>
<tr><td>7/1/2014 – 12/31/2014</td><td>3</td></tr>
<tr><td>1/1/2015 – 2/5/2015</td><td>0</td></tr>
</table>
Daily Average Parameter Values Outside Established Operating Ranges for Smelt Dissolving Tank West Scrubber
<table>
<tr><th rowspan="2">Period</th><th colspan="2">Operating Range from Title V Permit</th></tr>
<tr><th>Pressure drop > 5 inches H_2O</th><th>Scrubber flow rate > 135 gpm</th></tr>
<tr><td>1/1/2012 – 6/30/2012</td><td>0</td><td>3</td></tr>
<tr><td>7/1/2012 – 12/31/2012</td><td>0</td><td>3</td></tr>
<tr><td>1/1/2013 – 6/30/2013</td><td>0</td><td>9</td></tr>
<tr><td>7/1/2013 – 12/31/2013</td><td>0</td><td>3</td></tr>
<tr><td>1/1/2014- 6/30/2014</td><td>1</td><td>1</td></tr>
<tr><td>7/1/2014 – 12/31/2014</td><td>0</td><td>6</td></tr>
<tr><td>1/1/2015 – 2/5/15</td><td>0</td><td>2</td></tr>
</table></td><td></td></tr>
</table>

<table>
<tr><th>#</th><th>Regulatory Citation</th><th>Findings/Observations</th><th>Supporting Evidence</th></tr>
<tr><td></td><td></td><td>Daily Average Parameter Values Outside Established Operating Ranges for Smelt Dissolving Tank West Scrubber
<table>
<tr><th rowspan="2">Period</th><th colspan="2">Operating Range from Title V Permit</th></tr>
<tr><th>Pressure drop > 5 inches H_2O</th><th>Scrubber flow rate > 135 gpm</th></tr>
<tr><td>1/1/2012 – 6/30/2012</td><td>0</td><td>3</td></tr>
<tr><td>7/1/2012 – 12/31/2012</td><td>0</td><td>3</td></tr>
<tr><td>1/1/2013 – 6/30/2013</td><td>0</td><td>9</td></tr>
<tr><td>7/1/2013 – 12/31/2013</td><td>0</td><td>3</td></tr>
<tr><td>1/1/2014- 6/30/2014</td><td>1</td><td>1</td></tr>
<tr><td>7/1/2014 – 12/31/2014</td><td>0</td><td>6</td></tr>
<tr><td>1/1/2015 – 2/5/2015</td><td>0</td><td>2</td></tr>
</table>
GP stated in its June 5, 2015, response to NEIC and in its Subpart S and MM CMS parameters table (CAA Appendix O), that it plans to utilize its upcoming Title V permit renewal process to update its Title V permit limits to be consistent with operating ranges used to determine compliance with 40 CFR Part 63 Subpart MM.</td><td></td></tr>
<tr><td>3.</td><td>8R Recovery Furnace (SN-26) Condition 92. Opacity
The permittee shall not cause to be discharged to the atmosphere from the 8R Recovery Furnace gases which exhibit opacity greater than 20%. Compliance shall be demonstrated by the use of the Recovery Furnace’s continuous opacity monitor.</td><td><u>Finding</u>
NEIC identified 46 instances when the 6-minute opacity averages were greater than 20 percent opacity for the 8R recovery furnace.

NEIC evaluated GP’s 1-minute opacity data, which is derived from its continuous opacity monitoring system, from January 1, 2012, through February 5, 2015. Based on review of GP’s Excess Emission Reports (CAA Appendix AA), GP reported 22 6-minute opacity averages greater than 20 percent opacity.</td><td>CAA Appendix Z – NEIC Analysis of 8R Recovery Furnace Opacity Monitoring Data

CAA Appendix AA – GP Excess Emission Reports 2012 through 2014</td></tr>
</table>

<table>
<tr><th>#</th><th>Regulatory Citation</th><th>Findings/Observations</th><th>Supporting Evidence</th></tr>
<tr><td></td><td></td><td>
8R Recovery Furnace
Number of Instances when 6-Minute Averages > 20 % Opacity
<table>
<tr><th>Quarter</th><th>Number of Monitoring Exceedances in NEIC Analysis</th><th>Number of Monitoring Exceedances Reported by GP</th></tr>
<tr><td>1st quarter 2012</td><td>1</td><td>1</td></tr>
<tr><td>3rd quarter 2012</td><td>12</td><td>3</td></tr>
<tr><td>4th quarter 2012</td><td>3</td><td>3</td></tr>
<tr><td>1st quarter 2013</td><td>19</td><td>5</td></tr>
<tr><td>2nd quarter 2013</td><td>1</td><td>1</td></tr>
<tr><td>3rd quarter 2013</td><td>2</td><td>0</td></tr>
<tr><td>4th quarter 2013</td><td>4</td><td>4</td></tr>
<tr><td>1st quarter 2014</td><td>1</td><td>1</td></tr>
<tr><td>2nd quarter 2014</td><td>3</td><td>4</td></tr>
<tr><td>TOTAL</td><td>46</td><td>22</td></tr>
</table>
</td><td></td></tr>
<tr><td></td><td colspan="3">CLEAN WATER ACT – DAREN VANLERBERGHE, DAVID GWISDALLA</td></tr>
<tr><td></td><td colspan="3">AREAS OF NONCOMPLIANCE</td></tr>
<tr><td>1.</td><td>
National Pollutant Discharge Elimination System (NPDES) Permit No. AR0001210, Part III, Standard Conditions, C.3. Monitoring Procedures – Monitoring must be conducted according to test procedures approved under 40 CFR Part 136, unless other test procedures have been specified in this permit.

NPDES Permit No. AR0001210, Part II, Other Conditions, 8. – In accordance with 40 CFR 430.01(i) the following EPA Methods must be used when testing bleach plant effluent as specified for Internal Outfalls 101, 102, and 103.
<table>
<tr><th>Pollutant</th><th>EPA Method</th></tr>
<tr><td>2,3,7,8-TCDD</td><td>1613</td></tr>
<tr><td>2,3,7,8-TCDF</td><td>1613</td></tr>
<tr><td>Trichlorosyringol</td><td>1653</td></tr>
<tr><td>3,4,5-Trichlorocatechol</td><td>1653</td></tr>
<tr><td>3,4,6-Trichlorocatechol</td><td>1653</td></tr>
<tr><td>3,4,6-Trichloroguaiacol</td><td>1653</td></tr>
<tr><td>4,5,6-Trichloroguaiacol</td><td>1653</td></tr>
<tr><td>2,4,5-Trichlorophenol</td><td>1653</td></tr>
</table>
</td><td>
<u>Finding</u>
GP was not conducting monitoring for 2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD); 2,3,7,8-Tetrachlorodibenzofuran (TCDF); and chlorinated phenolics at internal outfalls 101, 102, and 103 according to test procedures approved under 40 CFR Part 136 and specified in GP's NPDES permit.

GP is required to use EPA Method 1613 (CWA Appendix B) when testing bleach plant effluent at outfalls 101, 102, and 103 for TCDD and TCDF. EPA Method 1613 states that only glass or fluoropolymer tubing shall be used when manually compositing samples. At the time of the NEIC on-site inspection, GP was collecting manual composites at outfalls 101, 102, and 103 from sample taps connected to plastic tubing that was not made of glass or fluoropolymer (CWA Appendix C, IMGP0045 and IMGP0047).

GP is required to use EPA Method 1653 (CWA Appendix D) when testing bleach plant effluent at outfalls 101, 102, and 103 for chlorinated phenolics. EPA Method 1653 states that only glass or polytetrafluoroethylene (PTFE) tubing shall be used when manually composting samples. At the time of the NEIC on-site inspection, GP was collecting manual composite samples at outfalls 101, 102, and 103 from sample taps connected to plastic tubing
</td><td>
CWA Appendix A – NPDES Permit No. AR0001210

CWA Appendix B – EPA Method 1613

CWA Appendix C –CWA Photographs

CWA Appendix D – EPA Method 1653

CWA Appendix E – April 21, 2015, Inspection Follow-up Correspondence

Observations and discussions with GP staff
</td></tr>
</table>

#	Regulatory Citation	Findings/Observations	Supporting Evidence
	<table><tr><td>Tetrachlorocatechol</td><td>1653</td></tr><tr><td>Tetrachloroguaiacol</td><td>1653</td></tr><tr><td>2,3,4,6-Tetrachlorophenol</td><td>1653</td></tr><tr><td>Pentachlorophenol</td><td>1653</td></tr><tr><td>AOX</td><td>1650</td></tr></table> **EPA Method 1613, 6.0 Apparatus and Materials** – *6.1.2 Compositing equipment—Automatic or manual compositing system incorporating glass containers cleaned per bottle cleaning procedure above. Only glass or fluoropolymer tubing shall be used. If the sampler uses a peristaltic pump, a minimum length of compressible silicone rubber tubing may be used in the pump only. Before use, the tubing shall be thoroughly rinsed with methanol, followed by repeated rinsing with reagent water to minimize sample contamination. An integrating flow meter is used to collect proportional composite samples.* **EPA Method 1653, 6.0 Apparatus and Materials** – *6.1.2 Compositing equipment—Automatic or manual compositing system incorporating glass containers cleaned per bottle cleaning procedure above. Sample containers are kept at 0-4°C during sampling. Glass or PTFE tubing only shall be used. If the sampler uses a peristaltic pump, a minimum length of compressible silicone rubber tubing may be used in the pump only. Before use, the tubing shall be thoroughly rinsed with methanol, followed by repeated rinsing with reagent water (Section 7.4) to minimize sample contamination. An integrating flow meter is used to collect proportional composite samples.*	that was not made of glass or PTFE (**CWA Appendix C**, IMGP0045 and IMGP0047). Following the NEIC inspection, GP provided information regarding changes made to address this issue (**CWA Appendix E**). An email dated April 21, 2015, from Sarah Ross of GP to NEIC stated that GP has "modified the procedure to replace tubing on the sampling station for Bleach Plant monitoring each time samples are collected (once per quarter)."	
2.	**NPDES Permit No. AR0001210, Part I, Section A. Final Effluent Limitations and Monitoring Requirements: Outfall 001 –** *During the period beginning on three years from the original effective date and lasting until the date of expiration, the permittee is authorized to discharge from Outfall 001. Such discharges shall be limited and monitored by the permittee as specified below.*	**<u>Finding</u>** **For parameters required to be monitored at outfall 001 as a 24-hour composite sample, GP was not collecting a flow-proportional or flow-weighted composite sample as specified in GP's NPDES permit.** GP was using automatic composite samplers (Hach® Sigma SD900 model) to collect 24-hour composite samples for NPDES permit compliance at outfall 001 (**CWA Appendix C**, IMGP0035). The samplers were programmed to collect 80-milliliter sample aliquots (equal volume) every	**CWA Appendix A** – NPDES Permit No. AR0001210 **CWA Appendix C** –CWA Photographs **CWA Appendix E** – April 21, 2015,

<table>
<tr><th>#</th><th>Regulatory Citation</th><th>Findings/Observations</th><th>Supporting Evidence</th></tr>
<tr>
<td></td>
<td>
<table>
<tr><th>Effluent Characteristics</th><th>Monitoring Requirements Sample Type</th></tr>
<tr><td>BOD5</td><td>24-hr composite</td></tr>
<tr><td>TSS</td><td>24-hr composite</td></tr>
<tr><td>2,3,7,8-TCDD</td><td>24-hr composite</td></tr>
<tr><td>AOX</td><td>24-hr composite</td></tr>
<tr><td>Dieldrin</td><td>24-hr composite[1]</td></tr>
<tr><td>Total Recoverable Copper</td><td>24-hr composite[1]</td></tr>
<tr><td>Total Recoverable Zinc</td><td>24-hr composite[1]</td></tr>
<tr><td>Total Phosphorus</td><td>24-hr composite</td></tr>
<tr><td>Nitrates as Nitrogen</td><td>24-hr composite</td></tr>
<tr><td>Chronic Whole Effluent Toxicity</td><td>24-hr composite</td></tr>
</table>
[1] The 24-hr composite sample may consist of four grab samples taken over 24 hours and flow weighted.

NPDES Permit No. AR0001210, Part IV, Definitions 20. – “24-hour composite sample” consists of a minimum of 12 effluent portions collected at equal time intervals over the 24-hour period and combined proportional to flow or a sample collected at frequent intervals proportional to flow over the 24-hour period.
</td>
<td>30 minutes (equal time interval) over a 24-hour period. Based on GP’s NPDES permit and the permit definition of a “24-hour composite sample,” GP is required to collect a sample proportional to flow or to be flow-weighted.

Following the NEIC inspection, GP provided information regarding changes made to address this issue (CWA Appendix E). An email dated April 21, 2015, from Sarah Ross of GP to NEIC stated that GP has “determined that our existing sampler was able to collect flow proportional composite samples; therefore, a new sampler was not needed. A new flow meter has been installed and is operational; however, in order to collect flow proportional composite samples, we did need to order a cable from Hach® to connect the current sampling equipment to the new flow meter. The cable has been ordered and will be installed upon receipt.”</td>
<td>Inspection Follow-up Correspondence

Observations and discussions with GP staff</td>
</tr>
<tr>
<td>3.</td>
<td>NPDES Permit No. AR0001210, Part II, Other Conditions 9. Specific Conditions Related to Best Management Practices Conditions – The permittee has performed all actions required by 40 CFR 430.03(j) within the time frames specified in that regulation.

The Permittee shall make the BMP Plan available at the facility for inspection by a representative of the ADEQ. The BMP Plan must contain all information outlined in 40 CFR 430.03(d) and demonstrate that the requirements of 40 CFR 430.03(c) have been implemented.</td>
<td><u>Finding</u>
The alarm for the continuous conductivity meter at the North 50% tank sump in the paper operations recovery area was set to 20,000 µMHOs on the GP distributed control system (DCS), and not 15,000 µMHOs as specified in GP’s BMP plan.

As required by GP’s NPDES permit and 40 CFR § 430.03, GP has developed a BMP plan for management of spent pulping liquor, soap, and turpentine. GP’s BMP plan was last revised and dated August 1, 2014 (CWA Appendix F). GP is required to implement the BMPs specified in the BMP plan, including the operation of continuous, automated monitoring systems that GP determines are necessary to detect and control leaks; spills; and intentional diversions of spent pulping liquor, soap, and</td>
<td>CWA Appendix F – GP Best Management Practices Plan

Observations and discussions with GP staff</td>
</tr>
</table>

#	Regulatory Citation	Findings/Observations	Supporting Evidence
	40 CFR § 430.03(c) Requirement to Implement Best Management Practices – *Each mill subject to this section must implement the Best Management Practices (BMPs) specified in paragraphs (c)(1) through (10) of this section.* **40 CFR § 430.03(c)(3)** – *The mill must operate continuous, automatic monitoring systems that the mill determines are necessary to detect and control leaks, spills, and intentional diversions of spent pulping liquor, soap, and turpentine. These monitoring systems should be integrated with the mill process control system and may include, e.g., high level monitors and alarms on storage tanks; process area conductivity (or pH) monitors and alarms; and process area sewer, process wastewater, and wastewater treatment plant conductivity (or pH) monitors and alarms.* **Georgia Pacific Best Management Practices Plan, Section 4.8 Spill Control and Recovery** – *5) Curbs, sumps, and piping were installed around the boil-out tank, and North 50% tank to recover potential spills. Collected material is pumped to the boil-out tank or storage for use.* *a. Individual components of the spill collection system include:* *North 50% tank sump conductivity* *North 50% tank sump level* *Boil-out tank sump conductivity* *Boil-out tank sump level* *b. Conductivity for spill collection is set at 15,000 µMHOs.*	turpentine. As stated in the BMP plan, GP's BMPs include the use of continuous conductivity meters with alarms set at 15,000 µMHOs. While inspecting BMP areas on February 9, 2015, NEIC inspectors observed that the alarm setting for the continuous conductivity meter at the North 50% tank sump in the paper operations recovery area was set to 20,000 µMHOs.	
	AREAS OF CONCERN		
A.		**<u>Concern</u>** **NEIC inspectors observed a spill or leak of material from a diked containment area at a maintenance area on the south side of GP's aerated stabilization basin (ASB) on February 6, 2015.**	**CWA Appendix C** – CWA Photographs

#	Regulatory Citation	Findings/Observations	Supporting Evidence
		The containment dike was for a tank containing Fennofloc F125, a treatment chemical used in GP's wastewater treatment system (WWTS). NEIC inspectors observed staining on the ground outside of the containment dike toward a natural drainage ditch (**CWA Appendix C**, IMGP0029, IMGP0030, and IMGP0031). According to Rachel Johnson, a GP environmental engineer, drainage in the maintenance area would flow to the ASB via the drainage ditch, and the Fennofloc F125 in the tank was last used in September 2014.	Observations and discussions with GP staff
B.		**Concern** **NEIC inspectors observed uncontained and exposed piles of slaker grits and lime in the paper operations recovery area on February 9, 2015.** Drainage of material in the area would flow to a sump and into the P2 process sewer (**CWA Appendix C**, IMGP0043). Slaker grits are generated, and lime is used as part of the chemical recovery process.	**CWA Appendix C** – CWA Photographs Observations and discussions with GP staff
C.		**Concern** **GP's use of pH data from daily composite samples at several process sewer internal monitoring points may not be indicative of discharge fluctuations and may not identify high or low pH discharges of short duration.** GP monitors the process sewer at several internal monitoring points prior to its discharge to the GP WWTS to identify process sewer upsets and spills, among other reasons. At several of the internal monitoring points, GP collects a 24-hour daily composite sample and measures the pH of the composite sample, among other parameters. At the time of the NEIC inspection, GP had recently installed continuous pH meters at two internal monitoring points (P2 and P3 process sewers), which will be incorporated into the facility's DCS. The ability to continuously monitor pH levels at those monitoring points will provide a better indication of sewer pH levels than a single daily pH measurement from a composite sample.	Observations and discussions with GP staff
D.		**Concern** **NEIC inspectors observed obstructions in the Parshall flumes at two internal monitoring points, potentially affecting the level measurement in the flumes and resulting flow measurements.** NEIC inspectors observed a pipe or conduit in the flume for the P2 sewer monitoring point on February 6, 2015 (**CWA Appendix C**, IMGP0002). Inspectors observed foam and solids in the flume for the No. 8B tissue sewer monitoring point on February 9, 2015.	**CWA Appendix C** – CWA Photographs

#	Regulatory Citation	Findings/Observations	Supporting Evidence
E.		**Concern** **Expired sodium thiosulfate preservative bottles were observed in the laboratory where NPDES compliance samples are collected for internal outfalls 101, 102, and 103.** For all parameters monitored at outfalls 101, 102, and 103 (TCDD, TCDF, chlorinated phenolics, and chloroform), 40 CFR Part 136 requires a sodium thiosulfate preservative to be added to the sample if residual chlorine is present in the sample. According to Rachel Johnson of GP, the samples are checked and do not show the presence of residual chlorine; therefore, the sodium thiosulfate preservative has not been added. Regardless of use, expired preservatives should not be stored and maintained.	Observations and discussions with GP staff
F.	**NPDES Permit No. AR0001210, Part II, Other Conditions 10. Permit Conditions for Accepting City of Crossett Wastewater** – *Georgia Pacific and the city of Crossett must maintain the agreement for the discharge of the City's treated effluent into G-P's wastewater treatment system.* **Georgia Pacific and City of Crossett Agreement, Exhibit A, Scope of Services, 1.a. City's Waste Material, Description/specifications** – *…The composition of the wastewater stream will be further described in a priority pollutant test, which City agrees initially (to) provide for its treated wastewater effluent by December 31, 2008, and once every 5 years thereafter for priority pollutants, as described in 40 CFR 122.21, which are reasonably expected to be present in the Waste and to provide such results to G-P.*	**Concern** **At the time of the NEIC inspection, neither the City of Crossett nor GP could provide documentation of an initial and second priority pollutant test of the City's treated wastewater effluent.** Effluent from the City of Crossett's municipal wastewater treatment plant is discharged into GP's WWTS upstream of the ASB. GP's NPDES permit requires GP and the City of Crossett to maintain an agreement for the discharge of the City's treated effluent into GP's WWTS. According to the agreement between the City and GP, dated July 15, 2005, the City agreed to provide an initial priority pollutant test by December 31, 2008, and once every 5 years thereafter (**CWA Appendix G**). NEIC met with City of Crossett Mayor Scott McCormick and City Engineer Jeff Harrison on February 10, 2015, to discuss the discharge of the City's effluent and the agreement with GP. Neither the City nor GP could provide any records of a priority pollutant test during the NEIC inspection. Following the NEIC inspection, GP provided information regarding updates to this issue (**CWA Appendix E**). An email dated April 21, 2015, from Sarah Ross of GP to NEIC stated that "the City of Crossett has completed the Priority Pollutant Scan (PPS) and no levels of concern were identified for any of the pollutants. This PPS report is available to the NEIC upon request."	**CWA Appendix A** – NPDES Permit No. AR0001210 **CWA Appendix G** – GP and City of Crossett Agreement **CWA Appendix E** – April 21, 2015, Inspection Follow-up Correspondence Discussions with City of Crossett and GP staff
G.		**Concern** **GP's NPDES permit does not contain effluent limitations or monitoring requirements for fecal coliform, even though sanitary wastewater is discharged through GP's WWTS and no disinfection is performed.**	**CWA Appendix A** – NPDES Permit No. AR0001210 Observations and discussions with

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		GP's WWTS receives sanitary wastewater from employees at the paper operations and chemicals plant, as well as effluent from the City of Crossett's wastewater treatment plant. Neither GP nor the City of Crossett perform disinfection as part of the wastewater treatment processes.	City of Crossett and GP staff
H.		**<u>Concern</u>** **The designation of the receiving waters in GP's NPDES permit as compared to the specified location of outfall 001 creates uncertainty for discharge compliance determinations, such as narrative water quality standards.** GP's NPDES permit designates the receiving waters for outfall 001 as "the upper reaches of Mossy Lake, then into Coffee Creek, then into Ouachita River in Segment 2D of the Ouachita River Basin." The location and sample location of outfall 001 is specified in the permit as "following the final treatment unit (aeration basin) at Latitude: 33º 06'22.55"; Longitude 92º 02'17.2" before discharge to Mossy Lake. The coordinates for outfall 001 specified in the permit correspond to the monitoring station located approximately 400 yards downstream of the outlet of the ASB. Between the outfall 001 location downstream of the ASB and Mossy Lake is a natural conveyance referred to by GP as the "effluent channel" and a portion of Coffee Creek. Based on aerial imagery, the distance in the effluent channel from outfall 001 to Coffee Creek is approximately 3 miles. The remaining distance from Coffee Creek to Mossy Lake is approximately 2 miles; however, the extent of Mossy Lake varies due to flooding. There is no specific location specified in the permit for "the upper reaches of Mossy Lake," which is the first designation in the receiving waters listed in the permit for outfall 001. GP's permit contains narrative standards for outfall 001 stating "there shall be no discharge of distinctly visible solids, scum, or foam of a persistent nature, nor shall there be any formation of slime, bottom deposits, or sludge banks." It is not clear where the receiving waters for outfall 001 begin; therefore, it is not clear where compliance standards for outfall 001 discharges should be applied.	**CWA Appendix A** – NPDES Permit No. AR0001210
	RESOURCE CONSERVATION AND RECOVERY ACT – LINDA TEKRONY		
	AREA OF NONCOMPLIANCE		
1.	**Arkansas Regulation 23 § 273.15(a) [40 CFR § 273.15(a)]** *A small quantity handler of universal waste may accumulate universal waste for no longer than one year from the date the universal waste is generated…*	**<u>Finding</u>** **On February 9, 2015, GP was storing three containers of universal waste for longer than 1 year.**	**RCRA Appendix A** – RCRA Photographs

#	Regulatory Citation	Findings/Observations	Supporting Evidence
		Two containers were located in the Technical Center universal waste area. One container of mercury-containing debris, and one container of used batteries – nickel metal hydride, were dated December 2, 2013, and December 9, 2013, respectively. The third container was located in the Central E&I Shop universal waste area. This container contained used high intensity discharge (HID) bulbs and was dated April 13, 2013. NEIC asked GP to document that the storage of these universal wastes for longer than 1 year was necessary to "facilitate proper recovery, treatment, or disposal" (40 CFR § 273.15(b)). GP's response to NEIC (**CWA Appendix E**) was that the containers were not full and the facility was waiting to fill the containers before shipping them off-site for disposal. Waiting to fill a container is not an acceptable reason for storing universal wastes for longer than 1 year. At the time of drafting this report, according to GP's response, the three containers had been shipped off-site for disposal.	**CWA Appendix E** – April 21, 2015, Inspection Follow-up Correspondence
	CLEAN AIR ACT SECTION 112(r) – LINDA TEKRONY		
	AREAS OF NONCOMPLIANCE		
1.	**40 CFR § 68.69(a)** *The owner or operator shall develop and implement written operating procedures that provide clear instructions for safely conducting activities involved in each covered process consistent with the process safety information and shall address at least the following elements.* *(3) Safety and health considerations:* *(ii) Precautions necessary to prevent exposure, including engineering controls, administrative controls, and personal protective equipment.*	**Finding** **GP has not its updated operating procedures when changes have been made to the chlorine water treatment process, a Program 3 process.** At the time of the NEIC inspection, the chlorine water treatment process consisted of two chlorine storage areas: Saline River Plant and the drinking water area. Two operating procedures for the chlorine storage areas (Best Practice for Chlorination Station (WC-226) (**CAA 112(r) Appendix B**) and Chlorination Station Emergency Shutdown (WC-503) (**CAA 112(r) Appendix C**)) reference the existence of only one chlorine monitor at the Saline River Plant chlorine storage area, even though one monitor was also installed at the drinking water storage area. Two new chlorine monitors were installed in the fall of 2013, one at each chlorine storage area, and the GP operating procedures were not updated to reflect this change. NEIC confirmed that four chlorine monitors were installed in the chlorine storage areas: two at the Saline River Plant chlorine area and two at the drinking water chlorine area.	**CAA 112(r) Appendix B** – Chlorination Station Best Practice (WC-226) **CAA 112(r) Appendix C** – Chlorination Station Emergency Shutdown Procedure (WC-503)
2.	**40 CFR § 68.69(a) –** *The owner or operator shall develop and implement written operating procedures that provide clear instructions for safely conducting activities involved in each covered process consistent*	**Finding** **The operating procedure WC-503 (CAA 112(r) Appendix C) references a chlorine storage area (Back-up Drinking Water area) that is no longer used by the facility.**	**CAA 112(r) Appendix C** – Chlorination Station Emergency Shutdown

#	Regulatory Citation	Findings/Observations	Supporting Evidence
	with the process safety information and shall address at least the following elements.	The current risk management plan (submitted in October 2014) (**CAA 112(r) Appendix D**) only includes the chlorine cylinders at the Saline River Plant and the drinking water chlorine area as part of the chlorine water treatment process. The back-up drinking water area was completely removed in April 2012.	Procedure (WC-503) **CAA 112(r) Appendix D** – October 2014 Risk Management Plan
3.	**40 CFR § 68.69(a) –** *The owner or operator shall develop and implement written operating procedures that provide clear instructions for safely conducting activities involved in each covered process consistent with the process safety information and shall address at least the following elements.* *(1) Steps for each operating phase:* *(v) Emergency Operations*	**Finding** **The operating procedure WC-503 (CAA 112(r) Appendix C) references an obsolete emergency response plan (PSM-001 – *Chlorine Emergency Response Plan*) and a job safety analysis for the cemetery pond chlorination station which is no longer in service.** NEIC requested a copy of PSM-001, and Tony Ory, GP chemical process safety coordinator, stated that the PSM-001 document is a legacy document and is not the current plan that would be followed in a chlorine emergency. The current plan is the *Emergency Response Plan/Hazardous Waste Contingency Plan* (**CAA 112(r) Appendix E**). Tony Ory further stated that operators are trained using the *Emergency Response Plan/Hazardous Waste Contingency Plan*. Following the on-site inspection, GP submitted a written response to NEIC (**CAA 112(r) Appendix F**) to issues discussed during the on-site inspection. This response states that operating procedure WC-503 has been updated to reference the correct emergency response document.	**CAA 112(r) Appendix C** – Chlorination Station Emergency Shutdown Procedure (WC-503) **CAA 112(r) Appendix E** – Select Pages from Emergency Response Plan **CAA 112(r) Appendix F** – Written Response from GP
4.	**40 CFR § 68.79(d)** – *The owner or operator shall promptly determine and document an appropriate response to each of the findings of the compliance audit, and document that deficiencies have been corrected.*	**Finding** **GP did not promptly address findings from the 2010 compliance audit (CAA 112(r) Appendix G) because the same findings were found in the 2013 compliance audit (CAA 112(r) Appendix H).** Several findings from 2010 were also findings in 2013. • Relief system design and design basis was not completely documented in the process safety information (2010 – finding 2.6, 2013 – finding 2.4) • Documentation did not indicate that operating procedures were certified at least annually to be current and accurate (2010 – findings 4.7 and 4.8, 2013 – finding 4.2) • Operating procedures for the chlorine water treatment process did not include safety systems and their functions (2010 – finding 4.5, 2013 – finding 4.6) • A written procedure has not been fully implemented for control over entrance to and exit from a covered facility by maintenance,	**CAA 112(r) Appendix G –** 2010 Compliance Audit **CAA 112(r) Appendix H –** 2013 Compliance Audit

#	Regulatory Citation	Findings/Observations	Supporting Evidence
		contractor, laboratory, or other support personnel (2010 – finding 5.5, 2013 – finding 5.9) • Employees have not been consulted on the frequency of refresher training (2010 – finding 6.1, 2013 – finding 6.1) • Incident reports were not reviewed with all affected personnel whose job tasks were relevant to the incident findings (2010 – finding 11.1, 2013 – finding 11.2) In addition, the 2013 compliance audit found that the chlorine water treatment emergency shut-down procedure (WC-503) did not reference the fixed chlorine monitors as a safety system. GP updated the procedure but only referenced one of the four monitors that are installed.	
5.	**40 CFR § 68.73(d)(3) –** *The frequency of inspections and tests of process equipment shall be consistent with applicable manufacturer' recommendations and good engineering practices…*	**Finding** **GP's *Inspection and Testing Equipment Matrix* (CAA 112(r) Appendix I) includes a thickness measurement frequency for injection points on piping that is not consistent with good engineering practices.** The *Inspection and Testing Equipment Matrix* applies to the equipment located in both the chlorine water treatment process and the chlorine dioxide process. The *Inspection and Testing Equipment Matrix* thickness measurement schedule for injection points on piping is every 5 years or by class. GP is using American Petroleum Institute (API) 570, *Piping Inspection Code: In-service Inspection, Rating, Repair, and Alteration of Piping Systems* as its basis for determining the thickness measurement schedules for piping and piping components. API 570 states that thickness measurements should be conducted on injection points every 3 years.	**CAA 112(r) Appendix I –** Inspection and Testing Equipment Matrix
6.	**40 CFR § 68.81(a) –** *The owner or operator shall investigate each incident…*	**Finding** **GP does not perform root cause analysis on contractor incidents, even though it is the owner or operator of the facility.** GP's *Investigation, Reporting and Tracking Compliance Standard* (**CAA 112(r) Appendix J**) states that contractors, not GP, are responsible for conducting a root cause analysis on contractor incidents. Including contractors on incident investigation teams is required if the incident involved work of the contractor (40 CFR § 68.81(c)). This requirement does not remove the responsibility of the owner or operator from conducting the incident investigations involving contractors.	**CAA 112(r) Appendix J –** Investigation, Reporting and Tracking Compliance Standard
7.	**40 CFR § 68.73(d)(3) –** *The frequency of inspections and tests of process equipment shall be consistent with applicable manufactures' recommendations and good engineering practices…*	**Finding** **GP did not conduct thickness measurements of piping in the chlorine dioxide process at the frequency recommended in API 570, *Piping Inspection Code: In-service Inspection, Rating, Repair, and Alteration of Piping Systems*.**	**CAA 112(r) Appendix K –** Email Regarding Piping Thickness Measurements

#	Regulatory Citation	Findings/Observations	Supporting Evidence
		GP has determined that the titanium piping located in the chlorine dioxide plant is Class 2 piping according to the criteria listed in API 570. The maximum inspection intervals for thickness measurements on Class 2 piping is 10 years. In an email to NEIC (**CAA 112(r) Appendix K**), Sarah Ross of GP stated that thickness measurements were conducted on the piping in August 2003 and then again in March 2015.	